# NEW ENGLAND FARMER

DEVOTED TO AGRICULTURE, HORTICULTURE, AND KINDRED ARTS.

NEW SERIES. **Boston, September, 1871.** VOL. V.---NO. 9.

R. P. EATON & CO., PUBLISHERS, OFFICE, 34 MERCHANTS' ROW. **MONTHLY.** SIMON BROWN, S. FLETCHER, } EDITORS.


## THOUGHTS FOR SEPTEMBER.

"Happy the man who flies the city throng!
Ev'ry tree, ev'ry brook that flows along,
Ev'ry pebble within its sparkling brim
Preaches wisdom and holiness to him."

ANOTHER summer has departed, with its scorching suns and parching droughts, and the gorgeous livery which she had put on has faded into wrinkled age.

The year is on the wane. Its fulness and vigor are gone. "It has reached the summit of the hill, and is not only looking, but descending into the valley below." The grass and grain harvests have been gathered in, while our great Indian Corn harvest waits for more cheering suns, and the fervid September days. In robbing us of summer beauties, Nature does not leave us without new objects of enjoyment.

Those who have eyes to see, and thoughts to go out through them, and have also a little prying curiosity, may find themselves in a comparatively new world in September, peopled by new forms in both kingdoms; animated by sights and sounds all peculiar to the month. It is "the rejoicing month for joyful insects; it is the most populous and the happiest month. The hens plash in the hedge, fish seek the deep pools, forest fowl lead out their young, the air is resonant of insect orchestras, each one carrying his part in nature's grand harmony. September, thou art the ripeness of the year! Thou art the glowing centre of the circle!"

Country life is a favorite theme of poets, and it is country life that makes poets,—the source from whence they draw their inspiration and facts for illustration and instruction. It is a pity that so many in the city cannot enjoy it, and a pity that so many in the country do not appreciate it.

How much we need—do we not?—some ukase of a despot, some imperial mandate, ordering a thousand or two at a time of discontented farmers into the city to labor in the occupations there,—in murky counting-rooms, overcrowded benches, or tied down to long and tedious hours over the counters in grocery, dry-goods and shoe stores, or the business of numerous other callings! Travelling daily over the same narrow and unsuggestive paths, shut in from the fragrance of flowers, the invigorating breezes of heaven and the glowing manifestations of an ever-present Deity, which are the common, every-day blessings of the farmer!

To gain life's chief end, usefulness and hap-

piness, most of us must live in the country and labor there. It is the yeomanry of the country, the tillers of the soil, who are the nation's strength; what they draw from the soil must sustain us or we die. And yet, it is so ordered, that in securing those supplies we are in the midst of the most fruitful sources of happiness, and under those conditions where we can be most useful to the world.

Old Nathaniel Cotton was right in saying,—

> If solid happiness we prize,
> In *our own breasts* the jewel lies,
> Nor need we roam abroad.

Who will become the great reformer in this matter, and like Israel's leader, bring out our people from a state of discontent in their vocation? Who shall be clothed with the power of the Grand Turk for a season, to change the conditions of men, so that each shall realize the responsibilities, cares and employments of the other!—the citizen to rural life, and the farmer to the city. The experiment is going on daily in a small way, but is needed on a grander scale.

We do not mean to say that farmers should sit down or labor on without sometimes gratifying a desire to see how people live and prosper in other avocations, and by visiting other localities than their own, learn more of the wisdom and power of the Great Cause of all things. It is a duty to learn all we can of the wonderful operations with which we have to deal, and of everything which influences them.

So, when the hay harvest is over, and the weeds are under subjection, it will not be extravagant for the farmer to "harness up," and with as many of the family as the faithful steed can comfortably take along, spend a week or more, or less, in visiting relatives or friends. By mingling freely, taking a lively interest in their affairs, putting a good many questions and exercising a lively observation, health will be promoted, the spirits made more buoyant and hopeful, and the mind filled with new and agreeable topics for reflection or discussion at a future time. Such journeyings for the family do not, in the long run, lessen the profits, but rather tend to increase them, while they certainly are days of recreation and high enjoyment.

The weather during the summer has been delightful. A little too dry, perhaps, but sufficiently damp to produce an abundant foliage on fruit and forest trees, to bring out charming flowers, keep the garden in a fresh condition, and to sustain nearly all the crops excepting the grass.

Last year, in June and July, the elements seemed to be greatly disturbed. We were melted with fervent heat, drenched with pouring rains or pounded with hailstones of alarming size. We looked through a powerful telescope to see if there were not some unusual commotion in the elements of distant worlds, or in those of our own, but all seemed as calm as the beautiful mornings of some of our summer days. We peered into the face of the planet Saturn, took an imaginary walk all around his rings, called at two or three of his eight moons, and indulged our curiosity so much as to stroll a few millions of miles down the road between the rings and the planet, but discovered nothing which would seem likely to disturb our mundane affairs.

The latter part of summer brought plentiful rains, so that the earth is crowned with gladness. The hay crop is light, but all other crops are promising well. The soil is now in condition to bring an abundant second crop on the mowing fields, and to secure good feed in the pastures. If frosts are delayed, a good corn crop may be expected. Wheat, oats, barley and rye, have yielded well, and have been harvested in good condition. Let us all labor on with pure and cheerful hearts, and all will be well.

---

## WEEDS AND WEEDING.

As a sort of introduction to two or three short articles on weeds, which follow, we give some experiments which were made in England a few years ago, to test the

### Value of Weeding.

On some of the large estates in England, experiments of much value are made with great fidelity and cost, which have not been entered into, as yet, among our people.

1. Seven acres light soil were sown to wheat broadcast; one acre was measured and not a weed pulled out of it; the other six were carefully weeded. The unweeded acre produced eighteen bushels; the six weeded acres averaged twenty-two and one-half bushels per acre—a clear gain of 25 per cent.

2. A six-acre field was sown with barley. The weeding, owing to the great abundance of charlock, cost $3 per acre. The produce

of an unweeded acre was thirteen bushels; of the weeded, twenty-eight bushels per acre; thus showing a difference of fifteen bushels per acre, besides the enormous advantage of having the land cleared for the next crop.

3. Of six acres sown with oats, one acre, unmanured and unweeded, yielded only seventeen bushels; the rest ploughed three times, manured and weeded, produced thirty-seven bushels to each acre.

It will be remembered, perhaps, that the English practice is to *weed* their grain crops, whether of wheat, barley or oats. They usually sow in drills, which makes the weeding much less difficult than in broadcast sowing.

### Destroy the Weeds.

After they once commence the work of haying, many farmers are extremely reluctant to leave it to perform any other work. It is quite certain, however, that there will be more or less of other work to be done every year, during the season of securing the hay crop. One item of this work is to destroy the weeds.

Farmers leave haying to secure a wheat, oat, or barley crop, because it would be a decided loss to let it stand; but the same persons will allow a luxuriant *weed crop* to perfect its seed and be scattered over many acres of the farm. This is abundantly evident every year to those who travel through farming districts. If one should come and sow an equal amount of vile seed over the farm, he would undoubtedly be prosecuted and heavily fined, as he should be, for such a misdemeanor.

Cannot both branches of duty be attended to in their proper season, so that neither shall suffer? We think they can.

In the first place, do not allow the work among the hoed crops to be delayed. Commence on the young corn, potatoes, and all other plants, as soon as they are fairly out of the ground, and, taking them in turn, go over them two or three times. When this is done, it must be a very foul soil that will produce many weeds before the first of August. If it does produce them, it is more economical to extirpate them by a day or two of labor than to allow them to stand. If not disturbed, they will probably injure the crops among which they grow, more than the grass would be injured by a few days' delay in cutting. Added to this, will be the serious evil of having the fields lavishly filled with the seeds of a variety of hardy and persistent weeds, which may remain as a pest for many years.

If, on the approach of the haying season, the grass fields are examined, and those that are the earliest matured are cut first, and this course followed throughout, the postponement of cutting a few acres for a day or two would not be attended with a loss at all comparable with that of allowing a crop of weeds to go to seed. There might be exceptional cases, but not many.

Farmers continually complain of the great labor required to keep down weeds, while the wormwood and pig weeds are breast-high among the corn hills and along the edges of their fields. So acres upon acres of potatoes present the appearance of a crop of worthless plants, the potato vines being completely overshadowed by them. The crop of tubers will probably come out in proportion to the vines which struggled for life over them.

The great loss to the farmer in subduing weeds, and the loss they cause in exhausting the power of the soil, which ought to go to the crops we are cultivating, are not yet appreciated. More attention should be given this matter by every one who has a crop to tend. It is bad enough to fight the insects over which we have little control, but it is a greater evil to see pestilent plants destroying the crops, and entailing losses upon generations to come.

### Weeds on the Highways.

Weeds are undoubtedly the most expensive crop a farmer can grow. Some farmers are aware of this, and will not allow them to grow in their fields. They are subject, however, every year to the cost of destroying those which have been sown by *other persons* upon their lands. Every farmer who allows burdocks and thistles to grow and perfect their seeds on the roadsides against his fields, virtually sows their seeds upon his neighbor's land.

In some countries, there are laws under which a farmer may bring suit against his neighbor, who neglects to destroy weeds in his fields, or upon the public highways adjoining his premises. There was such a law, we think, in Massachusetts, some years ago, in regard to what is called the Canada thistle,—and it operated beneficially.

In Denmark there is a law to oblige the farmers to root up the corn marigold, and a clause enforcing the extirpation of weeds in

hedges along the sides of roads passed the House of Commons in England sometime ago, but was thrown out by the House of Lords.

This matter of the destruction of weeds, both in fields and on highways, would be a good subject for discussion in all *Farmers' Clubs* next winter. Through their attention and influence, some means may be devised to awaken an interest in farmers to combine, and by united action, to abate the wide-spread and expensive evil.

---

### What Shall be Done with Weeds?

Certainly, not pulled and left upon the ground, if *their seeds are only formed*. It is not safe at this stage of their growth to throw them into the hog-yard, or to put them in a heap with manure. Nor will it be safe to leave them upon the ground where they grew. Some of them are so tenacious of life that, even if the plant be pulled up, it is said that the sap will flow upward, the flower will bloom, and the seeds ripen to be scattered over the fields the next year. There is no killing them by gentle means. They will live three feet under ground for years, and if the land is again stirred to that depth, up will spring a thick crop of weeds, again to flourish in their full strength. We have seen a stout pigweed pulled entirely out of the ground, with the exception of the end of a very small root, not only to go on and live, but to blossom and perfect a large crop of seed! Do not trust them in any position, where a complete decomposition will not speedily take place, either by fire or the agency of some strong alkaline or other substance.

If dried on the ground after the seed is formed, there will be danger. If thrown into heaps, they will not be likely to rot before some of them have perfected seed. If thrown to swine, a portion of them would be left to go on with their work of maturing seed, and so it would be if they were mingled with manure. They cannot well be burnt in their green state, so that the safe and economical course is to throw them into a compact heap, and mingle them with quick lime, or wood ashes, or keep them moist so that they become thoroughly heated and decomposed. Even then, the mass should lie exposed to the sun and air until quite certain that the vitality of the seeds is destroyed.

### A SMALL FRUIT GARDEN.

A correspondent of the Rochester, N. Y., *Rural Home*, probably the proprietor of the Mt. Hope Nurseries, says: One of his foremen, owning a garden 80 by 100 feet, has handed him the following statement of fruit sales during the season of 1870. His trees are twelve years old.

| | |
|---|---|
| 5 bu. Shropshire Damson plums from two trees, $3 per bushel, | $15 00 |
| 2 bu. mixed Plums, $2 per bushel, | 4 00 |
| 1½ bu. Flemish Beauty Pear, $3 per bu., | 4 50 |
| 3 bbls. Louis Bonne from 4 trees, $7 per bbl., | 21 00 |
| 1½ bu. Buerre Giffard Pear, | 2 50 |
| 1 bu. Bartlett Pear, | 3 00 |
| 2 bu. Beurre d'Anjou Pear, $4 per bu., | 8 00 |
| 3 bu. Duchesse d'Angouleme, $4 per bu., | 12 00 |
| | $70 00 |

Six gallons of wine were made from grapes grown in the same garden. Vegetables enough for family use were raised among the trees. This is certainly a very satisfactory statement and should encourage others to make a like good use of their small lots. In the same neighborhood there are many others who are doing equally well with their fruit.

---

### DEAR FEED.

On the 5th of July, J. L. Pickering sold at auction the grass on some thirty acres of land, for a price $150 greater than that brought last year for the crop on the same lot. On some parts it is reckoned that the hay will cost the purchaser about $35 a ton, allowing nothing for cost of cutting or chances of loss in curing. A ton of hay on Main street, to-day, (Concord, N. H.) is reckoned as worth $40, or very close to it, and grass standing in the field as $30 a ton. On the same day as this sale a ton of corn could be had for a trifle less than $30. Knowing the value of each article as productive of flesh, fat, or power in their cattle and its price, any man can make his own figures and decide what is the most economical feed for his stock.—*N. H. Patriot.*

A perusal of the above may be the means of collecting and preserving many tons of fodder. The fodder-harvest will not end until the Indian corn crop, and the aftermath of the grass fields, are secured. If the utmost care is observed in all this time to gather up every thing available in the way of fodder for stock, and to secure it in good condition, hundreds of tons may be saved that are usually neglected when the hay crop is abundant. With such care, the farmer may possibly be enabled to winter his usual amount of stock, and have a few tons of marketable hay to spare at high prices.

A meagre grass crop has been anticipated all over New England, and has led to the occupation of a large amount of land with corn for fodder, millet, oats, hungarian grass and clover. The season, so far, has not been altogether favorable for these crops, but so much has been done, that they will compensate in a

considerable degree for the lightness of the grass crop. If the farmer, therefore, by extra care in collecting and carefully making, saves what under other circumstances he has been in the habit of neglecting, these shortcomings may prove advantageous to him after all.

Again, who knows now, what blessings may come by plentiful rains, delayed frosts, rich pasture feed and abundant second crops? "It is a long lane that has no turn," and a long drought that has continued nearly two years.

Let us not anticipate inconveniences that may never arise, but make all possible provision for the future by preserving what we do have; hold on to our stock, husband all our resources with economy, and cherish an unfaltering trust in Him who ruleth all things well.

---

*For the New England Farmer.*

## HOBBIES.—BLOODED STOCK.

There is another hobby fixed up for the farmer, fraught, perhaps, with more mischief to his interest than most any other. I should not dare refer to it, did I not feel that so obscure an individual as I am, should my views ever meet the public eye, would be looked upon in the light of a very small dog baying the moon; and therefore would not excite any attention from the very learned advocates of the subject I am about to mention. I refer to the raising of what is called stock of pure blood.

My attention has been called to this for two reasons. One is the great prominence that was given to this subject at the meeting of the State Board of Agriculture at Framingham last winter, in which it seems to me that the speakers really proved the very converse of what they intended. And secondly, the efforts that are being made to exclude from competition for premiums at our County Fairs, all bulls, the pedigree of which is not found in some herd book.

Now if the bull of any other breed whose pedigree cannot be traced to an importation from some foreign country is excluded, why not all cows, also, and so proclaim at once, that no excellence or improvement is to be expected from any other quarters than from these far-fetched and dear bought animals? As well might all ploughs, all mowers, and, in fact, all agricultural implements, excepting those of a particular manufacture, be excluded on the same principle, viz., that it is idle to look for improvement anywhere else?

I start with the proposition that very little is established in regard to the physiology of stock breeding, if you depart from the rule laid down many years ago by a quaint old man, that the breed of the pig always went in at the mouth; or of the other man, who sold his neighbor a cow after the said neighbor had milked the cow himself and measured the milk till he was satisfied of the amount she gave; but who after getting her home found a great falling off, and upon complaining to the seller about it, was told for answer, ah, I sold you the cow, but I did not sell you my meal chest; thus conveying the idea that it is feed and not breed that really makes the chief difference in cows for dairy purposes.

Now, of what particular breeds the seven pairs were that Noah took into the ark, I do not pretend to conjecture, but unless there were more than one pair of a kind, it follows that our modern breeder has not such enlarged views of cattle breeding as the antediluvian herdsmen had, when it was deemed necessary to preserve seven pairs after their kinds; for in our days we must be confined to two or three.

The first speaker on this subject was Prof. Law, who spoke of the fundamental principles of breeding. He said "we find that the foundation of all success lies in the common aphorism, "like produces like," or, I suppose, in other words, that like causes always produces like effects. "As the acorn developes into the oak, and wheat into the wheat plant; as the horse, ox, ass, sheep and pig reproduce their respective kinds, so are the corporeal, constitutional and mental qualities of particular animals reproduced in their progeny." "The rule holds alike as regard good qualities and defects."

Here, then, I thought, the Professor had laid a foundation for his superstructure, but soon, it seems, he began to think that this foundation was too broad altogether; for pretty soon he says, "but the fundamental principle that like produces like, is not an inviolable rule; were it so, every breed would retain the same qualities throughout all time and no improvement would take place," or, in other words, it seems to me, that like causes do not produce like effects. "Variations always take place, sometimes from unknown causes; sometimes from causes under our control; and in our ability to solicit, to foster and to perpetuate such variations lie all our powers of improving a breed."

The Professor then goes on to show that some of the known causes of variation consist, first, in feeding. He says, "under a more abundant diet the intestinal canal of the domesticated cat and swine becomes more lengthy and capacious than their wild progenitors. Hogs allowed to run wild on the bleak Falkland Islands, have reverted in form and other characteristics to the type of the wild boar. Not so with those turned adrift on the rich soils of La Platte or Louisiana. A similar result took place in a pig which was seized at two months old with a disease of the digestive

organs, which permanently interfered with digestion and nutrition. Though a highly bred Berkshire, it assumed the long snout, the coarse bristles, ridged back, flat sides and long legs of the wild boar or unimproved breeds."

But I must not multiply quotations. The Professor goes on to show that food, climate, removal to foreign countries, soil, the imagination, and so many other things come in to modify his general principle, as to prove to my mind that more depends on the feeding than the breeding. Under the head of imagination, he refers to the case of Jacob and Laban, and says, "how much was miraculous and how much a natural consequence we don't know. That God took this means of blessing his servant, does not necessarily imply that He made use of other than the already existing physiological laws, and intensified them, as when he now cheers the land with an abundant harvest."

Now whether this intensification of the laws of nature so as to make them produce results out of the common course of action is good philosophy or not, I do not pretend to say; but the result mentioned in the Bible, looks very much to me in the light of a miracle or a special providence, if you please. I prefer to consider it, for my present purpose, in this light, and I think that any one who will read the 10th and 12th verses of the 31st chapter of Leviticus will come to the same conclusion.

I feel I am extending these remarks to too great a length, and must defer till another time some more thoughts on this matter. I intend to glance at the opinions of some other speakers on this subject, and also to say a word in regard to their bearing on the practical farmer, in excluding from competition at our County Fairs all male animals except the progeny of these far-fetched and dear bought animals.

J. L. HUBBARD.

*Peabody, Mass., July 21, 1871.*

---

*For the New England Farmer.*

## OUT-DOOR GARDENING.

"Now comes fulfilment of the year's desire;
The tall wheat colored by the August fire
Grows heavy-headed, dreading its decay,
And blacker grows the elm trees day by day.
About the edges of the yellow corn.
And o'er the gardens grown somewhat outworn
The bees go hurrying to fill up their store.
The apple boughs bend over more and more;
With peach and apricot the garden walls
Are odorous, and the pears begin to fall
From off the high trees with each freshening breeze."

Our gardens at this season richly repay us for all the care and attention expended upon them. Every color and shade are represented in the beds cut into the lawn, or edging of the walks. Geraniums are in a blaze of glory. Some of the double varieties are particularly beautiful, and outshine all our other pets. From the Innisfallen Greenhouses we obtained Andrew Henderson, which is one of the finest that is grown; it is of the deepest, richest scarlet tint; and each cluster will often contain from sixty to seventy blossoms. Madame Rose Charmeux is of a perfect rose color, its flowers are very double and perfectly formed. Gloire de Nancy is a carmine crimson, flowers double as a rosette. Ville de Nancy is somewhat similar to the preceding, but its leaves are beautifully zoned, and its clusters of flowers are of a larger size. Mons. R. Abel is of an exquisite rose color, shaded to carmine, and is said to be the prettiest colored of all the double varieties. Rose Queen is of a lighter rose, and is particularly desirable for window gardens. Ascendency is a shrubby growing species, with zonale leaves well defined. Marie Croussee is the lightest colored double geranium yet cultivated, and its flowers are very double.

All of these varieties are most desirable for winter culture, on account of their freedom from the attacks of insects; not a spider or *aphis* ever approaches them. At this season preparations should be made for window gardening.

Cuttings strike very rapidly in these hot days, and all kinds of plants can be propagated. In a few weeks vigorous plants can be procured if we but select large, strong-growing shoots, cutting them eight to nine inches in length, and leaving a bud, or heel, as the gardeners term it, at the base. Plant them one inch deep, about the edge of pots filled with good loam, and a layer an inch in depth of scouring sand. Wet it thoroughly, then insert the cuttings—planting them firmly in the sand; set the pots in the shade for three or four days, then give them sunlight, and be very sure to water them at night and morning, for if allowed to dry they will surely die. In this way, a goodly supply of fresh young plants can be secured, and they will bloom earlier in the winter than the older plants, if they are strong and vigorous. Such plants are considered far more desirable for window gardens than those which have bloomed during the summer. Plants require a season of rest, and if our Heliotropes, Geraniums, Roses, &c., have bloomed profusely during the summer, we cannot expect them to blossom when the sun has partly withdrawn its invigorating rays.

It is only in California and other lands of the sun that such plants will flower for twelve months in the year. If the buds are all picked off from our house plants during the summer months, they will make fresh efforts to fulfil their mission and be adorned with beauty and fragrance in the winter. We dislike to sacrifice the fair promise of blossoms, and yet if we are willing to do so we shall reap our reward when skies are wintry and the grass sear and brown.

### Climbing Vines.

Every porch, piazza, or veranda should be ornamented with one or more of the lovely climbing plants so profusely scattered over the

world. We should select those that have a light and graceful foliage, and produce fragrant or brilliant flowers. Roses are much used for this purpose and are very beautiful for a few weeks. The Gem of the Prairies is the handsomest variety now cultivated. It is a hybrid betwixt the Queen of the Prairie and Madame Laffay, but its flowers are far more beautiful than those of its parents, and they possess much fragrance. Baltimore Belle is an old favorite, blossoming in large clusters of nearly white flowers. Mrs. Hovey is purely white.

Wistarias are much cultivated on account of their rapid growth and delicately cut foliage, which is covered with pendant racemes of light blue or pure white flowers. The Chinese species grow more rampant than the American, and are not as desirable in some situations on that account. Both Roses and Wistarias are such strong growers, that they are not as suitable for porches as some other vines, but are preferable for training up on pillars and twining about the cornices of piazzas, or over arbors. The Japanese Honeysuckles, which have been imported in these few last years, are very fragrant and their foliage is evergreen in some localities. The variegated leaved varieties are very beautiful for porches or lattice work; they grow rapidly and their stems are wiry; the foliage is beautifully netted with gold; and the flowers are white and rarely fragrant. The *Lonicera halliana* is one of the best species; its flowers are white, but change to a golden yellow, and are very odorous. The Dutch Monthly Honeysuckle blooms nearly all summer, if planted in a moist, shady situation, but in hot, dry soil, it is apt to lose its leaves and become mildewed. The Trumpet Honeysuckles are well known and always beautiful.

Among the importations of the few past years from Japan, we find a beautiful vine, *Akebia quinata*, with five-lobed leaves, and very peculiarly shaped chocolate purple flowers which bloom in May and June. The foliage is tough and leathery, and hangs on the branches nearly all the winter. It is admirably adapted to light, latticed porches.

The different species of the Clematis are very lovely for ornamenting porches or verandas. There are two or three varieties which produce double flowers which belong to the species of Clematis viticella, blooming from June to September. Clematis flammula is an European variety which blooms in July, and is very fragrant. Some of the large-flowered varieties are very lovely, but are not hardy enough to bear our New England winters without being laid down and covered with evergreen boughs or straw. Clematis florida and Clematis lanuginosa are among these varieties.

Within the past ten years some very beautiful hybrids have been raised by the English florists. Among these are Clematis Jackmanni, with large, deep-colored violet flowers and it blooms profusely. Clematis rubra-violacea differs from the former in the color of its flowers, which are shaded with a reddish violet tint. The Golden Bignonia is not commonly cultivated, but is a very choice plant in the Middle States. It is nearly evergreen and supports itself by tendrils. The Pipe vine, *Aristolochia sipho* makes a large growth in one season, and will cover a great extent of trellis. The peculiar shape of its flowers gives it the name of Dutchman's Pipe.

The Ivies are well known to all our readers, and there is a native species called the Five-fingered Ivy, which is very pretty, especially in the autumn when its leaves are brilliantly tinged with crimson.

Our native grape vines make a delightful shade over kitchen or dining-room piazzas. Five or six years ago we planted the seed of a delicious Hamburg grape. It germinated, grew vigorously, and we flattered ourself that we had obtained a new variety which might be of some value. But no; when it fruited we were possessed of the commonest grape of the wild woods—the little, sour, bluish purple, "fox" grape. "Cut it down," was the general exclamation of the household. "Why should it cumber the ground?"

But we thought best to save it as a shade for a kitchen piazza, and as we write we gaze through its leafy depths with great satisfaction. No bug touches it; its broad leaves cool the air and keep off the sun, and when it is in bloom it perfumes the house with its delicious fragrance, but its fruit is of no account. Still it does its work, fulfils its mission, and we are content with it.

Unless we pay some care and attention to our climbing vines their beauty is greatly impaired. It gives them a dishevelled, slovenly appearance to grow without training and pruning. The long branches should be carefully nailed up, or entwined around the lattice work or twisted about strings. The side shoots should be confined with bits of leather and nails.

Morning Glories, common as they are, are very beautiful in our eyes. We love them for old associations, for childish recollections. They grow and bloom without care or attention, and in the early morning are indeed a glory. Their clinging stems are entwined in a marvellous entanglement. No hand can untwist them. They wreathe the kitchen and dairy with perfect beauty. Let us all plant them and love them. S. O. J.

## CURIOUS INSTINCTS OF THE BEE.

Honey bees are governed by instinct and not by art. They never deviate from the course they were created in. The first comb they ever built was as perfect as at the present day; no art has improved the shape or size. One bee lays all the eggs, while the

others raise the young and protect them; each bee does its part of the labor in gathering in the stores and nursing the young; and I have noticed for some years past their mode of gathering pollen or bee bread. It is this:—When a bee goes out after food, it alights on some kind of flower and gathers a part of its load; then goes to another of the same kind, and perhaps a third, to obtain a load. Another bee goes out and if it alights on another kind of flower it keeps to that kind till it gets a load. But how is this known? You go to the hive and watch them as they come in; some have yellow pollen on their legs; others have light color; others have dark; but no bee has two colors on his legs. If you see any you will see more than I have, for I never did; and I have supposed that they stored it in different cells for a change of food. The other day in overhauling a hive, I broke out a new piece of comb and found the different colors in different cells, which confirmed my belief; for I suppose they like a change of food as well as humans.

Another curiosity is their coming out and alighting before going off; for amongst the hundreds that I have hived I never had one swarm leave direct from the hive. Another curious thing is their rearing the males and nursing them so tenderly; and after they become useless they destroy them. But instinct has directed them to do it. Another curious thing is that, when they get to be too numerous, the mother bee should call out a part of the brood to go with her and leave the others to take care of the young. Why not call them all out to go with her? Because instinct has ordered it otherwise. Certain ones go out with her while others are coming in with stores for future use. A certain part of them don't seem to have any inclination to follow the mother bee, nor do they mourn the loss, for another is provided.

How wisely the Creator has arranged every part and movement! It is curious, too, how the eggs in the drone cells are all drones, and those in the worker cells are all workers. We would suppose they would get mixed up like hen's eggs. Again, when they want a queen why not make a mistake sometimes and take a drone egg? And also by feeding a certain kind of food, make a queen instead of a worker. Again, the queen before she is hatched is head downwards, which would seem to be unnatural; but the All-wise has made every part perfect.—*A. Wilson, in Rural New Yorker.*

## HARD AND SOFT WATER.

Dr. Letheby, at a recent meeting of the medical officers of health of Great Britain, took occasion to renew his statement, already referred to in our pages, of the superiority, in a sanitary point of view, of a hard-water supply to towns over that of soft water. Basing his arguments first upon physiological considerations, he maintained that the earthy matters in the hard waters were essential for the construction of the osseous tissues, and that they supplied much of the calcareous salts necessary for the nutrition of the frame, and that, by repudiating their use, we should be throwing away one provision of nature for this purpose. No one could say that a hard water was not far more agreeable to drink than a soft water. He maintained, in the second place, that the finest specimens of the English race were to be found in regions where the waters were hard, from flowing out of, or over, calcareous strata. The same was the case with cattle and horses; witness those reared in such counties as Durham and Leicester, and the horses of Flanders, while the Shetlands only produced a race of ponies. But his principal argument was that on classifying the towns of England, so far as their water supply was known, according to the degrees of hardness of the waters; the average of the death rate was least in those towns supplied with hard water, and increased as the waters became softer and softer, until it was highest in those where the water supplied was most soft. These statements, however, were met with much vigor by several speakers, among the most eminent of whom was Mr. Wanklyn, who endeavored to show that the deductions of Dr. Letheby were based upon incorrect premises, and that the case was very far from being proved.—*Ag. Department Report.*

FOREIGN WOOL.—According to the Circular of Geo. W. Bond & Co., of Boston, there has been imported into the United States during the past six months ending June 30th, 16,754,215 pounds of foreign wool. Of this amount, five millions have come from England, five millions from Buenos Ayres, three and a half millions from the Cape of Good Hope, a million and two-tenths from Turkey, and the balance from France, Brazil, and sundry other places. The importations are the largest that have ever been made, exceeding by about a quarter of a million pounds the importations for the corresponding period of 1863, which was, up to that time, the largest ever made, being 16,486,176 pounds. Last year, 1870, the importations for the six months, were only 6,951,516 pounds. The Circular says: "The demand for army clothing in Europe completely used up the surplus stock of coarse wools, and the world over they are scarce and high. We never remember such a dearth of them in this country as at present."—*Michigan Farmer.*

DWARF RAGWEED.—At a late meeting of the Academy of Natural Sciences of Philadelphia, Mr. Thomas Meehan exhibited a small plant of the common ragweed, *Ambrosia arte-*

*misiæfolia*, which had grown in a pot in his hot-house. The plant, little more than an inch in height, was already provided with fertile flowers and also bulblets. He remarked that it was a common impression that when land was put down in grass the ragweed disappeared, but that after an unlimited number of years, when the ground was broken up, the weed reappeared, as supposed from the development of seeds which had long remained in a dormant condition. If such pigmy plants as the one exhibited can perfect seeds, it is evident that a multitude of them might perpetuate themselves among the grass unnoticed from year to year, until under favorable circumstances a crop is produced, which becomes conspicuous from their size. Thus their occurrence may be explained without the necessity of an indefinite extent of vitality.—*Ag. Department Report.*

## EXTRACTS AND REPLIES.

### MAKING HAY.

I wish you to inform me the best way to get my hay. Shall I cut it after the dew is off, and get it in the same day, or cock it up and get it in the next day, provided it is fair? Please inform a constant reader of your paper.

### CUTTING OFF THE TAILS OF COWS.

I have two heifers, one two years old, the other three years. The two-year-old makes four pounds butter per week; the three-year-old, five pounds per week. They have been fed on good hay and grass, and no other feed. One of my neighbors tells me if I cut off their tails they will do better. How much shall I cut off? They are just as they were made. The flies are now beginning to trouble them, and my man says their tails must be cut off, as they swing round in his face when milking.

I. E. M.

*Ashland, Mass., July, 1871.*

REMARKS.—This and one or two other papers were mislaid, or would have been attended to at an earlier day. We think the practice of cutting grass in the morning, drying it in the sun three or four hours, then cocking and let it stand over night, is a good one. If fair the next day, *shake* it out,—not merely turn it over,—and get it in at noon or immediately after.

You have some very promising heifers, and are so, probably, because they have been humanely treated. As to their tails, the first inquiry we would suggest is, "What were their tails made for?" The reply will undoubtedly occur to you. First because that caudal appendage adds greatly to the beauty of the animal,—as the last touches of light and shade finish off and give grace and strength to a beautiful picture. The second reason would be that the animal should have the power of driving off insects that annoy it, sometimes puncturing the skin to such a painful extent as to drive the poor beast to madness! Would you deprive your pet heifers of this power? Tie "*your man's*" hands behind him with an iron-grip, and place him on his back with his face in the sun for a couple of hours, where the flies congregate, and when he comes out of it, ask him if *he* would have the tails of the heifers cut off?

We have seen a gad-fly, *Œstrus bovis*, attack a cow in order to pierce the skin and deposit its eggs. In a moment she would seem beyond all control, and her extreme terror and agitation would seize the whole herd. She would run and bellow to some distant part of the pasture, or into the water if any were near. "Such is the dread and apprehension in the cattle, for this fly," says Mr. Clarke, "that I have seen one of them meet the herd, when almost driven home, and turn them back, regardless of the stones, sticks and noise of the drivers; nor could they be stopped till they reached their accustomed retreat in the water." Should you like to see one of your handsome heifers, with a *gad-fly* after her, and only a stump of a tail to beat him off with? No, we trust not,—humanity forbids it.

Milk the cows in the barn, when it is a little dark, or tie the tail to the leg while milking, if nothing better can be done, but do not mutilate the poor animal, and deprive her of the power of protecting herself against the pinching and blood-seeking insects that persecute her.

### HARD LOOK FOR FARMERS—CROPS IN MAINE.

We are having rather hard times in this part of the country about this time. Last summer and fall it was very dry, and no grass was left on the ground last fall. The past spring and first part of the summer it was very dry, and the hay crop must have been quite short at the best. And now the grasshoppers, like the locusts in oriental countries, are sweeping all before them. We have never seen anything like it before. Our grass is trimmed of all, or about all, of its leaves, and, in many places, of its heads. Our grains have been served in the same manner in many places, leaving nothing but the bare straws for us. Many have cut all their grain before ripe for fodder or have turned their stock into it to get a part before the hoppers shall get the whole, and others will be obliged to do the same. As to hay, we shall get about one-third of a crop in this section, on an average. Men who used to cut about forty tons of hay will cut this year some ten or twelve tons, such as it is, and our grain is nowhere. Our pastures are all eaten and dried up.

L.

*South Sangerville, Me., July 26, 1871.*

REMARKS.—A private letter from Vermont is equally gloomy. The writer says "farmers in this section wear a sad countenance. Taxes are enormously high, and so is labor; hay crop about one-half; pastures so dry that the grasshoppers suffer; the reports of stock and produce markets are really awful; too few of us have sheep to be cheered by the advance in wool; and those who owe for farms and stock recently purchased are in a sad condition."

### CANKER WORMS.—DUTCH COWS.

I am a mechanic, and on a very small scale, a farmer also, cutting hay enough to winter a horse and a cow. I have a good young orchard, and one-half of my trees blossomed full this year. I can say the same of but few orchards in this

vicinity, for there was a very small proportion of the trees that had any blossoms. I have discovered by examining my trees that the canker worm has commenced its work; though I had not seen any in this section before. Is there anything I can do to destroy these pests?

I have been much interested the past winter and spring in reading in the FARMER the various communications on stock, and on the different methods of making butter and cheese, from the different breeders of cattle and dairymen, and have come to the conclusion that there are some good cows from all breeds. Some farmers have a preference for one breed and some for another; but which particular breed is best for our farmers to raise is yet open to discussion. More has been said recently about the Jerseys, perhaps, than any others, but I wish to speak a word for the *Dutch*, and to compare notes with the owners of other breeds.

I have a Dutch heifer that dropped her first calf May 22, 1870, being then two years old. I raised her calf, giving it, at night, the milk the heifer gave in the morning; and, in the morning, what she gave at night. So you will see at once that I did not get all the cream from the milk, but I have got a good yearling. We made all the butter we have wanted in a family of two, and a part of the time three persons, and have butter enough now to use for six weeks.

The heifer dropped her second calf the 13th day of June, 1871. I milked her twice every day from the day she dropped her first calf until she dropped her second one, and there was no day on which she gave less than four quarts and a pint of milk, which was of a superior quality. We did not use the milk nor sell it for the last two weeks before she dropped her second calf, but in addition to raising the calf and making butter I sold twenty-five dollars worth of milk the last winter. Her feed was one quart of meal and one quart of shorts with what hay she would eat. Averaging her milk at six quarts a day, which is a low estimate, she gave over twenty-three hundred quarts of milk. T.

*Mount Vernon, N. H., June 16, 1871.*

### CANKER WORMS.

We have a fine orchard of one hundred trees, and this season the canker worms have commenced their work in this region. They have not done much damage yet, but we expect them in countless millions next year. Thinking the FARMER the best authority I could refer to, I would inquire for the best and cheapest way to protect our trees.

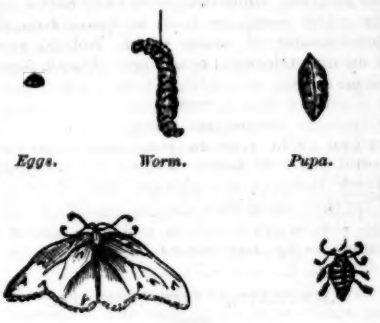
I am only twelve years old, but am bound to be a farmer, and want to raise apples.

JOHN H. ELKINS.

*Kingston, N. H., Aug., 1871.*

REMARKS.—You cannot destroy the canker worms that have done their work this season. They probably disappeared soon after the date of the first letter. After a pretty hard frost this fall, say in October, a few of them may appear, and in the spring a whole army of them, but in a different form from that in which they ate the leaves and spun down from the trees; and the female, especially, will appear in a different form from that represented in most of our books on fruit, including Mr. Thomas' "American Fruit Culturist" and the recently published "Apple Culturist" by that excessively practical writer Sereno Edwards Todd; both of which books represent the female of the canker worm with short wings, a mistake which both authors probably copied from the first edition of Mr. Cole's Fruit Book. Mr. Cole was probably led into the error by copying an illustration in a foreign work, of a nearly related insect; an error which he corrected in the later editions of his book.

The following are fair illustrations of the canker worm in its different stages, except that of the moth, which is not well made.



*Eggs.* *Worm.* *Pupa.*

*Incorrect drawing of Male.* *Female.*

The male canker worm moth, of which our illustration is faulty, has four wings; but the female is wingless, as seen above, and hence is obliged to crawl up the trunk of the tree in order to lay her eggs on its branches. Consequently her ascent can be prevented by putting tar around the trunk of the tree. This is usually done by fastening with strings or otherwise, a strip of canvass or strong paper, eight to twelve inches wide, snugly around the trunk of the tree, and applying the tar to this. Of late, cheap printer's ink has been much used instead of tar, as the latter does not dry as soon as the tar does. By the faithful use of this preventive many have preserved their trees in the vicinity of Boston,—among others, Mr. Joseph Breck, of Brighton, whose orchard is in a neighborhood badly infested by the canker worm.

Another preventive which can be made by any farmer or farmer's boy, with a little lumber, and some gutter stuff, oil, &c., consists of board boxes around the trees. The boards for the boxes should be about ten inches wide, and of a length corresponding with size of the tree,—four strips to a tree. Leave about three inches space between the trunk and box, which should be filled with tan or earth and tamped in solid, after pressing the lower edges of the box into the ground. About three inches from the top edge of the box, and on the outside, a wooden gutter, fitted neatly at the corners, is nailed on, and the corners made tight with roofing cement. Then four strips of clapboard are nailed on in such a manner as to form a roof over the gutter. The gutter is then filled with coal or bug oil, over which the grub cannot pass. Leaves, &c., may be blown in upon the oil, which must be removed or the creatures will make use of them for bridges. With proper attention these boxes have proved effectual, and not expensive. One man used chain pump tubing, sawed into two parts, at

small cost. The boards may be of cheap stuff; the clapboards ought to be pretty good.

We hope the foregoing will be of some use to our correspondents, and particularly to Master Elkins, whom we are especially anxious to assist in his fight with an insect that has proved itself a match for much older and more experienced persons. The receipt he sends us would be no protection against the canker worm. Nothing short of an utter impossibility will prevent the ascent of the grub.

### SQUASH BORER.

I have a field of Hubbard squashes which have looked well until lately. The vines seem to dry up, and in hills where vines have not commenced to run, the stalks are eat off under the ground. Larger vines which have put out a number of leaves seem to be drying, wilting up and dying out. Can you tell me the cause and a cure? H. A. M.

*Hudson, N. H., July 17, 1871.*

REMARKS.—Some cultivators have had to abandon squash raising on account of this destructive insect. The first scientific description of it ever published was written for the NEW ENGLAND FARMER, (old series) by Prof. T. W. Harris, who gave it the name *Egeria cucurbitæ*. The grub or caterpillar, that does the mischief has sixteen legs. After devouring the inside of the vine it enters the ground, forms a cocoon of a gummy substance covered with particles of earth, changes to a crysalis, and comes forth the next summer a winged insect. The moth is conspicuous for its orange-colored body, spotted with black, and its hind legs fringed with long orange-colored and black hairs. It deposits its eggs on the vines close to the roots, from the first of July to the middle of August. From these eggs the "borer" is hatched.

The only remedy we know of is to cover the stems of the squash vines with earth for some distance from the root, and as the mother moth prefers to leave her eggs near the root, she will leave those thus protected and hunt up some other person's vines and lay her eggs there.

### EXPERIMENTS IN MANURING FOR CORN.

I planted a piece of corn this season, manuring a part with horse manure, and a part with chip manure which had received a little of the barnyard soakings, partly as an experiment, and partly for the want of any better manure. The first mentioned corn came up ahead of the other, with apparently stronger stalks, and retained its precedence for about three week, after which that manured with chip dirt shot ahead; and now at the second hoeing, the rows can be distinguished at quite a distance by the considerably larger size of the stalks, and the darker hue of their color. The corn was planted on poorish, sandy loam, and manured in the hill. I will give you the results in the fall if they are worth it. I have been told by several this spring that chip dirt or even green muck is better for corn than horse or cow manure, and begin to believe it myself.

### ASHES IN THE HILL.

Did you ever know of ashes, applied in the hill, killing corn? I applied about a pint to the hill on a piece a short time since, and a few rows which did not get hoed for several days show many stalks entirely rotted off close to the ground. Perhaps I applied too much ashes.

### SOIL FOR ONIONS.

Do onions require a mellow or a hard soil? I have been told to put them on a hard soil, but am having fair success on a deep mellow soil, manured with hen-manure, ashes and soot, with a sprinkling of brine.

### CUT WORMS.

The common white grub worms are doing much damage by eating off the corn just below the ground hereabouts. What will stop them, or is there no relief to be had? W. H. W.

*Barnston, Que., June 31, 1871.*

REMARKS.—Send us the results of your experiments in manuring for corn.

Clear wood ashes would be likely to injure the tender corn shoots, applied as liberally as you state; especially if leached by rain so as to form a pretty strong lye at one time.

Persons engaged extensively in the culture of onions, state that they do better on a deep soil, but one that is a little compact on the surface.

We have never known any substance applied to the soil that would destroy the white grub or cut worm. Much mischief may be prevented by opening a hill where one stalk has been cut down, and hauling out the depredator. He may be found readily in most cases.

### SYSTEM AND PLAN.

*Jones* has a place for everything,
And everything in place;
A snug tool-house—a handy building,
That fills its proper space.
*Smith's* tools are lying all a-spread,
In every way that's loose;
You might pasture an hundred head
In his "great wagon-house."

*Jones* aims at common sense practice
In everything he does;
*Smith* runs blindly—goes by guess,
That source of many woes.
*Jones* imitates the prosperous man
In every noble trait,
*Smith* follows "old ruts," with no plan,
At "a poor dying rate."

*Maine, 1871.* J. W. L.

### WHITE SPECKS IN BUTTER.

White specks in butter should be avoided, as they injure the keeping and also the sale of butter. Mrs. A. M. B. in No. 23, though not a farmer's wife (she ought to be,) mentions a new cream strainer, &c. When the specks are in the cream, and she wishes to crush them, let her try the old "cheese strainer" and she will find a good cream strainer unpatended. But I believe more in prevention than cure. Therefore we would find the cause, then apply the remedy. First, in the spring the air is very drying, and a current of air blowing on the surface of the cream in the milk room, as it is rising in the pans, drys it in particles so hard that churning fails to break them up. Another cause. Warming the milk room by a stove, the heat rising to the upper part of the room, heats the jars on the top shelves so as to partially melt the cream on top, and makes it so hard it breaks into lumps or specks. After rinsing the butter, if specks remain, work the butter when it is so cold and hard you can hardly do it with the butter worker, and you will break many of them. If many specks remain in the buttermilk, strain them out with a seive,

and then strain them through the seive and they will come through nearly churned butter. T. B.
*Addison County, Vt., July, 1871.*

SCARCITY OF FODDER—SOWING CLOVER.

There is more stock in this town than can be fed, with every means used to furnish substitutes for hay. If we are obliged to dispose of only the worthless stock, there will be little loss.

How late in the season can red clover be sown and have it live through the winter? Many fields must be re-seeded before they will yield much hay. We intend to plough and re-seed as fast as we can manure the land. F. F. FISK.
*Mast Yard, N. H., 1871.*

REMARKS.—There is some difference of opinion among good farmers with regard to the time of sowing clover seed. This is not singular, as there is a difference on nearly every item of farm labor.

The objection to sowing in August or September, is, that the new roots do not get sufficient attachment in the soil, and strength to withstand the cold of winter. This would depend very much upon two things,—the kind of soil, and the character of the winter. If sown upon land that is drained, or a loam that is porous, or upon a gentle slope where the water would not stand upon the surface, we think clover would establish itself so as to resist the cold of any ordinary winter weather. If quite wet, the roots will not penetrate the soil much, and are likely to be thrown out by frost, and the plants perish.

So on a field that is generally favorable, if there are low places where the water stands, it will freeze over, and in the process of freezing and thawing the clover will be killed out. This is quite often the case, not only with clover, but with winter wheat. Where the soil, then, is in either of these conditions, it would be the best way to sow clover seed about the first of April. In an emergency, however, like the present, we should not hesitate to sow clover at any time during the month of August.

A writer in the *Western Farmer* states that, during a practice of sixteen years, he has sown clover seed in mid-winter on the snow, in the spring, in the summer and in the fall, and has had the seed fail of catching in all the seasons, except when sown in the month of August. His practice is to sow in the month of August, and put no crop with the seed, except it is for *protection*. When sown after a crop of oats, enough oats will come up from the stubble for protection.

Since it has been a practice to hoe level in corn-fields we have sometimes laid them to grass with excellent results while the corn was standing. There are some advantages in this process. One is that, unless the drought is very severe, the surface of the ground in the corn-field will be moist; and this is indispensable to a quick starting and growth of the seed.

A second is, that the standing corn *is a protection* to the young grass, which is very tender in its early growth, and is often killed by the hot sun when standing alone.

A third and important advantage is, that few or no weeds will be in the way, as it is presumed that the corn has been kept clean. The grasses, and the clover, having been well rooted in the fall,—in the spring they will take the lead of weeds and foul grasses, and thus kill out a variety of plants that are not wanted. If the land is kept in good condition afterwards, by top-dressing, it will become thoroughly stocked with the rich grasses which are desired.

We agree with you, that most of our grass fields *must be re-seeded*. The nearly two-year's drought and the uncovered surface of the fields of last winter, have so far destroyed the roots of the timothy and red top, as to make this re-seeding a positive necessity.

The rains of late July and early August are getting the soil into a favorable condition for laying to grass, so that it will be well to re-stock as much as can be well done.

CHESS, OR CHEAT.

Will you please tell me the name of the grass enclosed? The only place we find it on the farm is where grass seed was sown last year.
*Mast Yard, N. H., 1871.* F. F. FISK.

REMARKS.—Mr. Flint, author of a work on "Grasses and Forage Plants," to whom we submitted your specimen says it is chess. Besides being a troublesome weed, especially in grain fields, it is of little or no value as fodder. Yet a few years ago the seed was sold as Willard's Bromus, at monstrous prices, and was advertised with the commendation of a committee of an agricultural society and with the names of distinguished friends of agriculture. A quantity was sent to the State Farm of Massachusetts, where Mr. Flint discovered its true character. He found by actual experiment that cattle which were fed swale hay and bromus or chess at the same time ate the swale hay first.

LAMOILLE VALLEY SCENERY—GARDEN STUFF.

I have been reading Mr. Brown's letter "Among the Farmers and Mountains." I am located in the Lamoille Valley, in fair view of Mt. Mansfield, and if he will visit this section on his next trip, I will guide him to any place of interest he may wish. Although he finds us Vermonters without gardens, I will treat him to potatoes, sweet corn, beans, peas, onions, carrots, beets, cabbage, turnip, lettuce, cucumbers, melons and oyster plants, and if his health is poor, I can offer him sage, saffron, wormwood, &c., from my garden; yet mine is no better than those of other farmers in this town.

BEES AND HONEY.

One thing which farmers neglect is the honey bee. It is really too bad, while nature has furnished so many plants and flowers for the secretion of honey, that the people so much neglect to care for and encourage honey bees, which alone are created to collect it for the use of man. The reason usually assigned for not keeping them is that they will sting. Now this is all wrong, for the bee, if rightly cared for, is just as harmless as any of our domestics, though if misused they will resent it even at the risk of their lives. Mr. Brown

couples bees and dust together in his letter, though I can t see why.

I should like to learn more about N. B. Hatch and his bees. It is rather an unsatisfactory description of a hive to say "It is of a plain square form, a quarter higher than it is wide," and honey sold for "about" $3000 is rather indefinite. Is that for this year or since he commenced the business?

I have eleven stocks of the black bees, and have got from them this season 180 boxes of honey, which will weigh from four to five pounds each. I use the Langstroth and the Colton hive, but prefer the former.

My bees allow me to do as I choose with them. I use no bee dress of any kind, yet I have turned the hives bottom side up and taken the honey from the body of the hive several times this season.

I am no hand to write, but if Mr. Brown will come to my place, I will lead him into the mysteries of the honey bee so he can describe a hive better than to say it is of a "*a square form, a quarter higher than it is wide,*" and he will find as many copies of the FARMER in our town as in any place of its size, I think. JULIUS G. MORSE.

*Cambridge, Vt., Aug., 1871.*

REMARKS.—Thank you, sir, most kindly. Your invitation is a sincere and hearty one, we have no doubt, and your criticisms are of the same stamp. Just what we like. In a ramble with you among the fields, bees and gardens, we should find instruction, and that is our aim whenever we go abroad.

We hope your letter will stir up farmers all over New England to cultivate gardens and bees, and, what is of still more importance, to cultivate a greater interest in each other by interchanging visits and communications in relation to their business.

But in order to make our remarks clear to our friend, we will say that the little "captions" in the letter which he has so kindly noticed, are designed merely to denote the topics which follow. English writers criticise our people quite sharply for making these divisions in books or in public letters or speeches. We like them. One reader may care little about "The Town of Whitefield," or "The Prime Crops of the Region," whose attention would be arrested at once by an account of bees. Portions of these letters are sometimes written in the cars, on the seat of the wagon, or in the tavern where a brisk conversation is going on.

We have reviewed the phraseology in our letter in relation to the *form of the hive*, and fail to see how it could be better. We were aware that no greater difference of opinion exists on any subject than that in regard to the size and form of bee hives, and in accordance with these opinions they are made and sold at a cost of fifty cents to ten dollars each. Our idea was, to state in the briefest manner, how any one could imitate the hives of this successful bee master; namely, "in a plain, square form, a quarter higher than they are wide, and boxes placed in the upper part." That is, if the hive were one foot square, across it, it should be one and a quarter foot or fifteen inches high; that is, as we understood him. We should think a better form would be one foot square in the clear, and the boxes above, five or six inches high, which would make the whole hive about one foot and eight inches high.

We hope the letter of our correspondent will cause more attention to be given to the culture of the honey bee. His crop of between 700 and 800 pounds from eleven swarms already taken up this summer, shows a very profitable business in that direction. The cash received for honey by Mr. Hatch was $3000 during his residence of some ten or twelve years on the farm. We shall certainly improve the first opportunity to visit the beautiful valley of the *Lamoille*, eat honey and garden sauce with our correspondent, and learn whatever we can that relates to farming. The "sage, saffron and wormwood" we hope to have no occasion to use.

---

### WHAT AILS THE FRUIT TREES?

A great many limbs of pear trees are dying. I did not observe it until since the fruit set, but now it is common in this county, to see limbs with the fruit shrivelled, and the leaves turning black. I have a fine dwarf tree in my garden that has borne fruit three our four years. It bears moderately this year, but a few days ago I sawed off one limb an inch in diameter, that was dead, besides some smaller branches. A standard tree grafted with the same variety, *Flemish Beauty*, is healthy yet, also one native tree, but in many places the natural tree is dying as much as any.

Many young apple trees are affected in a similar manner. The young twigs dry up, turn red, and die. Can any one tell the cause?

The season is dry, though not so dry as last year.

The crop of apples will be pretty good. Small fruit scarce. Grapes are doing very well. I have some Concord vines that are well loaded.

Grain is good. Rye mostly cut. Barley harvest has commenced,—a great deal of it raised in this county. Peas will be good. Hay crop light, but mostly secured, and in prime order. Corn looks well.

The potato bug has not reached us, though many are frightened, and, of course, find bugs in abundance on their vines, but the true "*Colorado*" has not been seen here, I think.

The past month has been cool, especially the nights. GRANITE.

*Bloomfield, Ont., 7th Mo. 27, 1871.*

REMARKS.—Some pear trees in this region are affected as described above. This, however, takes place every year in some degree. Perhaps some of our readers have given special attention to the matter, and can throw light upon it.

Cutting off the dead branches as fast as they show signs of disease is generally practiced.

---

### RED WATER IN A COW.

A neighbor has a cow that is troubled with what he calls red water. The cow is growing poor and is almost dry of her milk. He has done all he can for her, but she still grows worse. He wishes to know if anything can be done for her, and what.

HENRY MILLER.

*Westfield, Vt., Aug. 8, 1871.*

REMARKS.—The diseases of our domestic stock are so similar to those to which our family physicians devote their time and attention, that we must

repeat our advice to consult them in cases of severe ailment of farm stock. No doctor would like to prescribe for a human being on such a statement of the case as the above. He would wish to see his patient and make up his mind as to the seat or cause of the trouble. Dr. Dadd says Red Water is a symptom of some derangement in the system, and not a disease of itself. If the kidneys do not perform their part in the animal economy, the result may be red water; or if the skin becomes obstructed, then the excrementitious matter which should pass off through its pores must find some other outlet, and may color the urine. Any derangement in the digestive apparatus may produce the same result. In short, many forms of acute disease are accompanied by high-colored urine. If the bowels are constipated give medicine or food to open them. Dr. D. recommends a tablespoonful of Golden Seal, in two quarts of Thoroughwort tea. A correspondent of the FARMER recommended a few years since corn-cob broth and White pine tea for red water. A Dover, Me., correspondent relates an instance in which vinegar proved highly beneficial. He says he had examined after death several cows thus troubled and found the bladder lined with what appeared to be warts. One tablespoonful of copperas and two of saltpetre, given once a day for five days, was also recommended by a Brookfield, Vt., correspondent.

### BEE KEEPING.—UNFORTUNATE INVESTMENT IN ITALIANS.

I have from fifty to sixty swarms of bees, from which I have usually had some fifteen to twenty-five swarms come off in a year, and from 800 to 1200 pounds of honey. This year they have not swarmed at all, and if I get 200 pounds of surplus honey I shall do better than I expect. And to add to my discouragement, the bee moth has got into my apiary and I fear will destroy all my bees.

These moths were introduced into my apiary by sending to West Gorham, Maine, to one of those beings in the human form that advertises Italian bees and queens for sale. As we had seen them highly recommended by able men three of us, neighbors, namely, Charles Labaree, Joseph Weymouth and myself, sent sixty dollars for three swarms of Italian bees, which cost us when we got them home twenty-five dollars per swarm. Now for the result. Mr. Weymouth's swarm died the first winter; Mr. Labaree's died the next summer, and mine lived two winters. They never made any surplus honey, and did not swarm at all. All the advantage I derived from the longer life of my swarm was the breeding of more bee moths than those that died sooner. The worst feature in the transaction was the fact that the "Italians" received were nothing but mongrels. L.

*South Sangerville, Me., 1871.*

### CABBAGE WORM REMEDY.—BORERS IN FRUIT TREES.

I send you a sure and cheap remedy for this cabbage pest, and one that is at hand in nearly every family. To one gallon of beef, ham or pork brine, that is strong enough to preserve meat in summer, add one gallon of water, and with a *small* broom dipped in the same and struck across a stick, the plant is readily saturated in every part. I tried it on fifty heads last September, one-half of which were nearly eaten up by the worms, and in twenty-four hours every worm was defunct, and not one appeared again during the season. Those that were only eaten on the outer leaves, grew thrifty and headed finely, and had to be *partially* lifted out of the earth to prevent splitting. Salt—"that makes the cabbage head"—is as congenial to this plant as it is to asparagus.

Some of my neighbors, through *fear*, have made the brine too weak, and failed to kill the worms. The fear is vain. Be sure to have the brine strong enough to do the work. I have tried it this year with the same good result. It has in no way injured or even discolored the plants. To be *retained* well on the plant, it should be applied at noon in a clear day.

To those who have no brine, I would suggest the adding one quart of coarse salt to two gallons of water, and apply as directed. If this fails to exterminate the vermin for want of the unctuous nature of meat brine, then add to the aforesaid, one gill of soft soap and mix it well before applying it. By this process one bushel of salt will save an acre of cabbages by one day's labor.

Do not make it too weak and then condemn the remedy; as has been the case with some who used only soap-suds instead of soft soap, and then condemned my *infallible* specific to expel all borers from my fruit trees, which I recommended some years ago in your highly useful journal.

*Shoreham, Vt., Aug., 1871.* K. HAVEN.

### TWO WAYS OF KEEPING STOCK.

Jones keeps his farm well stocked with good,
Nice-looking, well tried strains;
Says "a good farmer never should
Sell off his hay and grains."
Smith thinks it is less work and fret,
To sell hay, corn and shorts,
And buy this grand Super-fust-rate,"
And feed out straw and oats.

Jones raises heavy porkers, too,
No matter what's the breed;
He says, whatever else is true,
The main point is the feed.
Smith each spring "turns his'n out to grass"—
The yard is made of rails,—
And to prevent their easy pass
Ties bow-knots in their tails. J. W. L.

*Maine, Aug., 1871.*

### CORN WITH CARROTS AND BEETS.

When I planted my carrots and sugar beets, I dropped corn in the rows, say two feet apart, so that I could see the rows of carrots and beets to cultivate them before the carrots were up. Now I am cutting my corn, and feeding it to my cows with good results. My beets and carrots are looking well, and apparently are not injured in the least by the corn. L. H. DOW.

*Cornish, N. H., July 26, 1871.*

REMARKS.—As suggestive as brief. The corn without the chaff. A model statement.

### TO KILL BURDOCKS AND CURRANT WORMS.

Cut off the stock close to the ground, and with your knife dig out a cavity and fill with fine salt. For the worms, take one pound of copperas and dissolve it in seven gallons of water. Is there any way to kill hardhacks? So much from a new hand who would like the proposed two pages of agricultural matter. A. H. C.

*Tilton, N. H., July 22, 1871.*

### EFFECTS OF SUPERPHOSPHATES ON SUCCESSIVE CROPS.

I have been experimenting somewhat this season with seeds, manures, fertilizers, &c., but must wait till harvesting before I can fully decide the

results. As this is the first year of using phosphate I would like to inquire of those who have used Bradley's for several years, what effect it has upon the soil or upon the crops, in subsequent years. JOSIAH MARSTON.

*East Medway, Mass., Aug. 1871.*

---

*For the New England Farmer.*

## HARVESTING CORN.

I wish to thank W. H. Y. of Connecticut, for his excellent article on "What is the best method of harvesting corn," published in the FARMER June 24th. He is right, according to my experience. Though I have never made such careful experiments as he has given, yet I believe every word of his statements, having tried the method of cutting up while the corn was quite green, and setting it up in the field. I should like to have him give his mode of operations, so that if it is better than my own way, I can try it.

Here is my way of doing it, and a description of some of the tools to work with. We have what is called a horse, made as follows: take a light stick of timber, eleven feet long, two and one-half inches square, or, if round, three inches at the large end, and two inches at the other. Three and one-half feet from the largest end put in two legs two and one-half feet long. These must stand bracing each other, their feet about eighteen inches apart, and stand perpendicular when the small end of the horse is on the ground. Next, bore an inch hole through the neck of the horse, half way between the legs and large end so that a stick three feet long put through it will be horizontal with the surface of the ground. This stick must slip easily in the hole. Then on the top of the horse, and back of the legs, insert two small sticks about fifteen inches long, and spreading at the top to each side one foot; also insert two others similar to these, two feet behind them, these form the saddle to lay the bands into.

For bands, we use fodder corn that is of the right length, well wilted; a bundle of this is fastened into the saddle of the horse. Now two men or boys with each a good corn cutter, take their horse, set it between the rows, so that each man can cut two rows and set the corn into the corners formed by the stick in the horse's neck as evenly as possible, and slanting enough to have it stand strong; cut twenty or twenty-five hills, according to the weight of the corn, that the shooks may not be too heavy to handle when dry. Then let one man take two or three stalks of the binders and bind the shook as close to the horse's back as he can, and the other man take a band, bend over the tops of the stalks and bind tight; then one man pulls out the stick from the horse's neck, the other man takes the horse and backs it out, carries it forward, sets it in its place for another shook; the other puts in his stick, and both are ready to cut again. After a little practice, the men will cut, set up, and bind a field of corn nearly as quick as they would cut, bind, carry out, and set up the top stalks, and do it without breaking down and wasting the corn. After standing two weeks, the corn can be husked if the fodder is wanted for immediate use, otherwise it had better stand until the cobs are somewhat dried.

To get in the corn to husk, take a short cart, with four stakes four feet long, and a boy to load; drive between two rows of shooks, and with a fork take each shook, between the bands, and place around the cart, with the buts out. Back into the barn floor, pull out the stakes, and tip up the cart. In this way you can get in a load or two in a few minutes, if you see a shower or storm approaching.

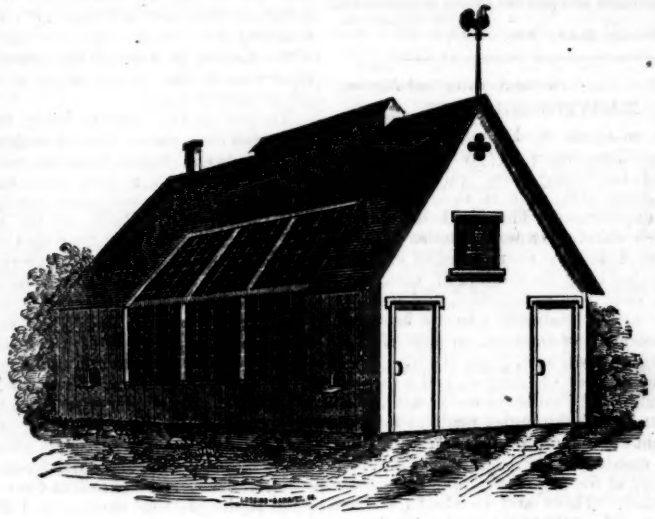
Last year we cut and set up our corn the first and second days of September, while looking quite green, but on opening the husks the corn was found to be well glazed. Treated in this way, the fodder is as much better than when harvested by the old way, as the top stalks are better than the buts after standing through bleaching storms and frosts, as is the old practice. It is excellent for cows giving milk in the fall or spring; and if you have pumpkins or turnips growing among the corn it gives them a better chance, and W. H. Y. has proved by thorough trial, that the corn itself is better every way, and I am satisfied that it is heavier and sweeter.

C. E. KIMBALL.

*Dudley, Mass., Aug., 1871.*

---

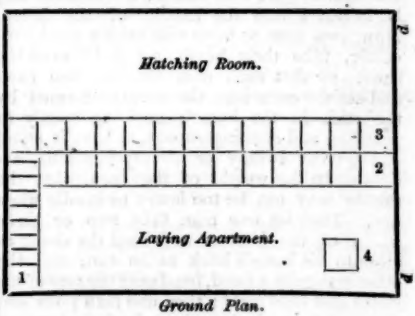
HOW THE HORSES WERE STOPPED.—A frightful disaster was recently averted in England by the good sense and bravery of a Cornish farmer. The horses of a stage coach had become unruly, and dragged the reins from the frightened driver, when the farmer, who was inside, forced himself upon the back of the shaft-horse, and thence to the leader. By patting and caressing, he guided the terrified beasts down a steep, mountainous road, through the narrow streets of a crowded village, and finally brought them safe to a halt in the open country, after a mad drive of eight or ten miles. Commenting on the farmer's method, and the award of a medal for the act, a London paper says: "It was odd that it should have required the visit of an Ohio farmer, some years ago, to make so elementary a truth clear, but in fact Rarey gave the truth a practical application. Horses, though docile and gentle, are timid and nervous; noise and violence will only aggravate their terror if once roused; but they can be soothed if a man has the sense and temper to go about his task in the right way. Rarey was an apostle of the truest humanity, and it is only to be regretted that much of his teaching fell on so stony and ungenial soil as the coarse nature of English hinds and carmen."



POULTRY HOUSE.

We copy these two illustrations from D. J. Browne's "American Poultry Yard." Many farmers who do not propose to build as large a house for their poultry, or who do not propose to build a separate one of any size, may find something in it which may be of use to them in fitting up a comfortable place in their barn or other out-building for the accommodation of their poultry.

"The accompanying cut represents a hen-house in perspective, 20 feet long, 12 feet wide, and 7 feet high to the eaves, with a roof of a 7-foot pitch, a chimney-top, a ventilator on the peak, 12 feet in length and 1 foot or more in height, and openings in the gable ends for the admission of fresh air. In the easterly end there are two doors, one leading into the laying apartment and loft, and the other into the hatching-room. In the same end there is also a wooden shutter or blind, which may be opened whenever necessary to let air or light into the roost. In the back, or northerly side, there is a large lattice window, three feet above the floor or ground, 4 by 12 feet, for the purpose of affording fresh air to the sitting hens. In front, or southerly side, there is a large glazed window, 4 by 12 feet, and another on the southerly side of the roof, of a corresponding size, designed to admit light and heat of the sun in cold weather, to stimulate the laying hens. In the southerly side there are also two small apertures three feet above the ground or floor, for the ingress and egress of the fowls. These openings may be provided with sliding shutters, as well as with 'lighting boards,' inside and out, and may be guarded by sheets of tin, nailed on below them, to prevent the intrusion of rats, weasels, or skunks."




*Ground Plan.*

Fig. 1, represents a ladder or steps leading to the roosting place or loft; 2, nest boxes for laying; 3, nest-boxes for sitting hens; 4, a stove for warming the apartments, if desirable, when the weather is very cold. The nest boxes are three or four feet from the floor.

## THE NEW MODE OF CURING HAY.

This new mode is by cutting the grass, getting it into the barn and storing it away on the same day. The process varies a little with different persons, but is mainly as follows:—

In the first place, it ought to be stated, that the grass is left until it arrives, in condition, to what is called the second bloom; that is, we suppose, when the latest of the blossoms are out. If cut earlier it is too full of juices to be easily cured by the new process. The true time would usually be from the 10th to the 15th of July.

The mowing is done in the morning, after the dew is completely off. Let it lie until about 1 o'clock, and then commence to rake and haul in, beginning where the mowing began, and so continue until that day's mowing is finished. This is stowed away in the bay, and the same process continued until the bay is filled. As it takes about twenty-four hours for fermentation to take place, the hay put on from day to day receives no injury from this cause. The top is then covered some eighteen inches thick with old, dry hay or straw. This absorbs the moisture given off by the heating process, and leaves the hay bright and sweet.

Such is the new mode of harvesting the grass crop. If it is a good one, it would save nearly or quite one-half of the labor heretofore required in securing it. It would save the time spent in cocking, in opening and shaking out the cocks, in covering them with caps, in tumbling them up for loading, and raking up the scatterings which they leave. It would save labor in tedding or turning the grass, and be far easier to load hay in windy weather, though somewhat heavier pitching on and off the wagon.

That hay has been, and still can be cured in this way, we have no doubt. At a public meeting in Lewiston, Maine, a dozen persons, well known in the community, and whose statements were received as facts, said they had practiced the process stated above with success. One of them, Capt. Taylor, of Winthrop, gave minute details of his hay-making for ten years in succession, and after all his experience, stated that grass cured by wilting only, and then stowed in large quantities in tight barns, is worth twenty-five per cent. more than grass made into hay in the old way. Several other persons, however, stated that they had "tried the new way," and found it a failure, some to the extent of the entire loss of their hay.

We shall be glad to get reports of further experiments in the modes of curing hay; and in this connection would thank our valued correspondent in Maine for his suggestions on page 380 of the August number.

---

Politicians in Farmers' Fairs.—In an article written some years ago by Judge Potter, and recently republished in the *Mirror and Farmer*, it is claimed that the first fair ever held in this country was at Londonderry, N. H., one hundred and twenty-nine years ago; that in 1719 the first Irish potatoes ever raised in America grew in this town, and the first exhibition of them was made in 1722, and that the first premium in America for Merino sheep was awarded by the "Derry Fair."

The writer closes by a reference to more modern fairs, and says:—

After 1807 and 1808 fairs began to be holden in other sections of the country, but the difficulties with England and the war of 1812, 1813 and 1814 checked their frequency and usefulness. After the war had closed, greater attention was paid to agriculture, and societies were formed in most of the counties in the State, and were continued for some years with decided benefit to all interests of the State. A "Board of Agriculture" was established, and the results of their labors were given to the public through the *Agricultural Repository*. But the usefulness of these societies was of short duration. Various causes operated to make them unpopular, the principal of which was *that they became identified with the party politics of the day, through the ill-advised scheming of politicians.*

---

Farmers' Clubs.—A member of a Farmers' Club in Evanston, Ill., which, in addition to the usual exercises of such associations, has an agent who contracts directly with manufacturers for such implements and tools as the members of the society need, and who also advises and assists in marketing grain and produce, writes to the *Prairie Farmer* that already more has been saved in this way in a single season than it will cost to belong to the club a life time, and concludes by saying:—

It seems strange that farmers all over the country will not take the matter in hand and deal mutually together, and work for each others benefit. Much can be saved every year in buying implements in this way, or in selling grain or other produce. Besides, there can be much valuable information gained by these friendly talks about how we farm, and how we ought to farm. Farmers, it is greatly to your interest to organize Clubs for your mutual benefit. Try it and see for yourselves.

---

Butter Making.—The editor of the St. Albans *Messenger* after giving some account of the farm of W. H. McAllister, of West Enosburg, Vt., who keeps about forty cows, says:—

He churns once in two days, works the butter very little on taking out of the churn, puts a layer

of the same in a tub, then one of salt, and so on until completed. Lets it stand two days, giving the salt an opportunity to penetrate the butter, then works and packs. By this method less working is found to be necessary, and the texture of the butter is not injured. Uses the Onondaga salt, three pounds to a tub of butter, and keeps in a nice, cool room in the cellar, constructed for the purpose.

---

*For the New England Farmer.*

## ON ADVERTISING FARMS FOR SALE.

It has been my lot to be called on to look at farms advertised for sale. A friend or acquaintance desiring to purchase would see an advertisement in the newspapers describing a farm and giving price, terms of payment, &c. So far as the description and terms were concerned, the place would appear to be exactly what he wanted. When visited, all the fancied desirableness of the property could not be found.

No man who understands the value of farm property for *farming purposes* is going to be deceived by any gilding an advertisement may place upon it. He will look at the actual condition of things, not at the remote capacity for improvements it may possess for him to develop. He knows that time and money are both required to bring up the productive capacity of lands. Every one who has had practical experience in farming, is aware that it is very much easier to run down and exhaust the productive capacity of soil than to increase it. When the trouble and cost of bringing up the fertility of a farm is considered, very few will purchase one that requires this to be done at the outset of his occupation of it, especially if he is dependent on his farming for his subsistence, as most farmers are.

It is the interest of every one advertising to state the *exact facts*, so far as it can be done. If a person desirous of purchasing is led to infer that a property advertised is more valuable than the actual condition will warrant when examined, the disappointment will frequently disgust him to such an extent as in a measure to blind him to its true value.

An experience of mine the past spring will serve to illustrate the truth of this statement. An advertisement set forth a farm for sale at a great sacrifice, with easy terms of payment. The buildings were represented as good; the land early and productive, with large quantities of fruit of all kinds, and the whole enclosed with stone walls, &c. I called upon the agent who advertised the place and saw the full description as given to him by the owner, which was even more satisfactory to me than the advertisement. The agent had not known the owner previous to his coming to him to sell the property, and thought him all right. I went to examine the property, at considerable expense. When I came within sight of it I was inclined not to get out of the carriage; but as the road was too narrow for me to turn around in, I had to go to the door yard for that purpose. Having got there and being obliged to wait somewhere for a train to bring me to the city again, I concluded to look over the place, thinking that it might possibly, like a "singed cat," be better than it looked.

I examined about all the lots with a spade. Found a light sandy loam, six inches in depth, on a subsoil of clear sand, suitable for a *mason's* use. Fruit of no account; walls very poor and much of them down; not a barway in condition to stop an animal on the place; cattle tied in the barn and feeding for the most part on swale hay and brewers' grain,—the latter hauled from Boston, sixteen miles away. In fact, the whole concern was miserable, and had been miserably cared for. The house appeared neglected, and looked as if it had not had a house-keeper in it for a dozen years. The locality was described as being pleasant and in a good neighborhood. The house was on a *back* road and not a neighboring one to be seen on it, though across lots and swamps, on a main road, there was one house in sight!

In all candor, I will affirm that plenty of farms can be bought any day for one-half the price asked for this one, which so far as situation and productive capacity are concerned, excel it in every particular. There is not any doubt that this place would be more likely to find a purchaser if it had not been extravagantly extolled in the advertisement. It was the most aggravated experience I ever had of the kind, and not soon to be forgotten.

Another wrong of frequent occurrence is that the agent who advertised the place is not promptly informed of the sale of the property or some portion of it. I have been victimized several times in this direction,—once during the present week. Two years since a large place, with very valuable wood on it, attracted my attention. I concluded if I could get a man whom I knew to be an excellent one to handle wood and lumber to join me, I would buy the place. I went to see the agent at a cost of two days' time and expenses, and arranged to buy if the advertised facts in reference to the place were confirmed on examination of the premises. Two more days' time and expenses disclosed the fact that forty acres of the best of the timber had been sold for over *three months*. The most provoking part of the imposition was, that the party when expostulated with by his agent for his wrong doings, appeared perfectly oblivious as to having done anything improper, or neglecting to do anything that he should have done.

So long as such practices continue, those desirous of purchasing farms will be slow to be influenced by statements made in describing them. No one has time and money to squander in such profitless pursuits.

A word more to those desiring to sell their farms. As soon as you have decided to sell, go to work and put your premises in good

condition, if you have failed to keep them so from any cause. See that your walls and fences are in good order; bar posts and bars up; gates cared for; everything snug around the barn and in it; the cattle clean; and the house in order every way. I have been greatly annoyed and often embarassed on going into a house to look it over to have the women apologizing about this and that untidiness, the worst of it being that there was really great occasion for those apologies by reason of the manifest daily neglect to keep the house tidy and decent for people to see.

These simple suggestions duly heeded will not cost much, but will aid essentially in selling any place at even a higher figure than can possibly be depended on if neglected. Purchasers prefer buying where no outlays for repairs are called for, and are wise in doing so.

*July 22, 1871.* K. O.

*For the New England Farmer.*

## CUTTING AND CURING HAY.

An article under this head has called forth some exceptions from the pen of C. H. Crandall, which require a passing notice. Perhaps Mr. Crandall may have taken the "extremes" that are spoken of, in his inferences. The term aftermath is used in speaking of the value for feed for milking purposes, and the argument still holds good, as the practice of any farmer will soon convince him. It was also used in showing the choice of animals between that and late-cut, hard hay. The illustration of the child is by no means a parallel case, since in one case the food spoken of as being selected by the child is not its natural food, and in the case of cattle, the nearer to green, succulent grass the food can be used, the nearer we are to nature; hence the use of steam in preparing the food.

Now about the question of going thirty or forty miles on the road with the load spoken of, we should not probably feed either of the articles named. In all labor of animals, as well as of man, there is a great loss of muscular tissue, so to speak, that must be restored, and that in the easiest manner; hence the food required is that containing the greatest quantity of flesh formers. This is not found in woody fibre.

The testimony of all is that after the period of inflorescence the stalk of grass passes rapidly into the woody state, and that the gum, sugar, starch and those ingredients that make up in a great measure the value of the food, rapidly diminish. Again, Liebig says that all plants, if left to mature their seeds, lose considerable of their value, which passes off as excrementitious matter. Another writer has said that he had rather have good bright straw for fodder than late cut timothy hay.

The reason why Mr. Crandall would prefer his timothy hay for a long drive, can be easily guessed at. It is well known that a man will work much longer on a full stomach than upon an empty one. Now it does not require demonstrating that aftermath, or rowen, is in a state to be exceedingly easily digested; while on the contrary, the timothy hay with perhaps not as much (comparatively) material for the rebuilding of muscle, but furnishing a large bulk of woody fibre, which is indigestible, continues in the stomach of the animal much longer, and hence with a full stomach the animal does not appear to be so soon exhausted.

We would not, however, wish to be understood as recommending rowen hay for horses on long journeys, much less green grass, for the reason that the stomach would soon be filled with this bulky material, and in reality still have a small amount of material for supplying bodily waste.

We do not offer these suggestions for the purpose of influencing any person to change any course that he may at present be pursuing with satisfactory results, but simply for the purpose of directing attention to a subject that should interest all engaged in agricultural pursuits. W. H. Y.

*Connecticut, July, 1871.*

## EXTRACTS AND REPLIES.

### THE TWO PAGES OF AGRICULTURAL MATTER.

I shall vote for two pages of hints on farming, for I am a young farmer and wish to know more about it than I do now, and am trying to improve from the many hints thrown out in your paper.

### BARREN NORTHERN SPY APPLE TREE.

One of my neighbors wishes to inquire about an apple tree called the Northern Spy which does not bear fruit. It has a beautiful top, perhaps more than ought to be allowed to grow.

*Weston, Vt., June 24, 1871.* E. A. Moore.

Remarks.—As to the subject of increasing the space devoted to agriculture in the Farmer, we can only repeat our promise to find or make room for every practical hint or suggestion which may be furnished by the readers and friends of the paper, or of the cause. We should like to show you the pile of manuscript that now goes into the hopper every week.

The Northern Spy is a tardy bearer. You do not state the age of your neighbor's tree. Writers on the subject of fruit growing, have sometimes, with the laudable purpose of encouraging its cultivation, made statements of cases of exceptionally early fruiting which we have sometimes thought were calculated to raise expectations which are seldom realized by the sanguine planter. We have seen it stated that the Northern Spy is from ten to fifteen years in coming into bearing. To produce fine fruit this tree needs a good soil and good cultivation. With such treatment the tree is a vigorous grower, and makes a thick top. Judicious thinning may be advisable, but we should caution against anything like a severe pruning. If your neighbor is very anxious to see a few specimens of the Spy apple, he might try the process known as

"ringing" on one or two branches that may be spared from the tree. Remove a ring of bark from some limb, say an inch through, the present month, to form buds for next year; and just before blossoming next spring remove a ring of bark from another limb to set the fruit. The ring of bark should be narrow,—say one-sixth of an inch, and be careful not to injure the wood under the bark.

MILLET AND HUNGARIAN GRASS.—DAM WITH GATE ACROSS A BROOK.—A HORSE WITH LONG FRONT TEETH.

Sirs, please inform me through your paper

1. What are the comparative merits of *millet* and Hungarian grass?

2. What is the best way to construct a dam with a gate across a brook that is ten feet in width?

3. I have a horse whose front teeth seem so long that the back teeth or grinders fail to meet, hence the horse eats hay with difficulty. What shall I do for it? Please inform an OLD SUBSCRIBER.

*Natick, Mass., June, 1871.*

REMARKS.—1. We are not able to give you exact comparative merits between Hungarian grass and millet. But if your wish is to know which we should recommend to be cultivated as fodder—not for seed—we should say, and say it from an actual experience in the cultivation of both, take the millet. With us it has been a more certain and profitable crop than the Hungarian grass.

2. We have little experimental knowledge about building dams and setting gates in them. Where the banks of the stream are of gravel or sand such dams are usually made of that material, with some framed work for the flume or gate. But if we had a quiet little brook, and wished to avoid the labor of carting or wheeling gravel, we should not hesitate to tongue and groove two-inch plank and drive them into the bottom of the brook, side by side, and insert the gate in other grooves made by nailing strips upon the planks which are to hold the gate in place. Practical advice, however, is safest for you.

3. About the horses' teeth. Get a person who has the nippers, and who knows how, and he will cut off the front ones without pain to the horse, so that he can eat comfortably again.

ON MOWING, PLOUGHING AND SOWING BUCKWHEAT.

I wish to make an inquiry through your paper, whether I can improve a piece of worn out land cheaper by ploughing it as soon as it is mowed,—for I wish to save what little grass there is,—then sow on buckwheat, and as soon as it gets large enough plough it under? It is some distance from the buildings and I want the manure for other land.

I am much interested in your paper, especially that part relating to the use of muck as a fertilizer. I have had some experience with it by the way of putting it in the hog yard, then putting in the suds from the kitchen and chamber slops, making a phosphate equal to Bradley's or any other. I have an acre of corn with no other manure, that is equal if not superior to any in town.

There are several other points I should like to talk with you upon, but dare not for fear I shall say something that will not be just right. One is about a cultivator that I have just made, that is superior to anything I ever saw of the kind.

*Chester, Vt., June 28, 1871.* J. J. MINER.

REMARKS.—Success in the operation which you describe would depend upon two conditions. First the presence of plenty of *moisture* in the soil, and some *fine manure*, which the sprouting seeds could lay hold of at once. Your work would be done in the midst of the hottest season, and when the soil is usually quite dry. A little manure, even, would be serviceable in such a case. Ashes would be excellent. With these conditions satisfied, there can be little doubt but what you would improve your land by the plan you propose. The grass roots decayed, and the green crop added, would give a fair manuring.

Tell us all about your new cultivator, and any of your farm operations. We are interested in them.

THE FIVE-SPOTTED HAWK MOTH.

Enclosed I send you an insect of a kind I never saw before, neither did any of my neighbors. Will you please inform us through the FARMER what its name is, its habits, &c.?

*Lunenburg, July 10, 1871.* H. G. BALLOU.

REMARKS.—The butterfly was received in good condition, and is the perfect state of the very large green caterpillar, with oblique whitish stripes on each side of the body with a kind of thorn upon the tail, which you have occasionally seen upon your potatoes, tomatoes, &c. Mr. Harris in his Treatise on Insects says, it attains its full size from the middle of August to the first of September, then crawls down the stem of the plant and buries itself in the ground. Here, in a few days, it throws off its caterpillar-skin, and becomes a chrysalis, of a bright brown color, with a long and slender tongue-case, bent over from the head, so as to touch the breast only at the end, and somewhat resembling the handle of a pitcher. It remains in the ground through the winter, below the reach of frost, and in the following summer the chrysalis-skin bursts open, a large moth crawls out of it, comes to the surface of the ground, and mounting upon some neighboring plant, waits till the approach of evening invites it to expand its untried wings and fly in search of food. It measures across the wings about five inches; is of a gray color, variegated with blackish lines and bands; and on each side of the body there are five round, orange-colored spots encircled with black. Hence it is called by English entomologists *Sphinx quinquemaculatus*, the five-spotted Sphinx. Its tongue can be unrolled to the length of five or six inches, but, when not in use, is coiled like a watch-spring, and is almost entirely concealed, between two large and thick feelers, under the head.

CELLAR DIRT FOR GRASS LAND.

Will the editor or some of the numerous readers of the FARMER please give me their experience through the FARMER, whether the clay dug out of a cellar would be beneficial to grass land, or would it be injurious? In this neighborhood there is such

a diversity of opinion about it, that I should like to get the opinions of persons who have or have not used it. I have a very large heap and it must be removed. When wet it is very greasy, but when dry and slacked, resembles sand more than clay or mud. How thick should it be spread on the grass? Would it be any detriment to corn land which is now in pretty good heart. JOHN WHATMORE.

*Bridgnorth Farm, Dunleith, Ill., 1871.*

REMARKS.—The clay dug from a cellar, of which you speak, will probably prove an excellent article for top-dressing grass lands, especially those of a light or sandy character. We are using something of the kind annually for that purpose, and for covering the manure in the cellar during the warm season. In excavating for a barn cellar, several years ago, large quantities of clayey earth were preserved for these uses. We find it not only very convenient but quite valuable.

You will not be likely to spread it too thickly; but ten to twenty horse loads to the acre, added annually, or once in two years, would be better than a heavy coating at once. By the way, the true value of a dressing of most earths which are free from stones, to grass land, is not generally appreciated. A top-dressing of yellow loam even, on a compact soil, will greatly assist a grass crop. All soils, we suppose, contain fertilizing properties, and when applied to the surface, these properties are washed down among the roots and are quite beneficial to the crop. Our advice is to use all you have, and get more if you can.

Of course the value of all subsoils for surface dressing, depends on their composition. On page 523 of the monthly FARMER, 1870, experiments by Mr. Gregory, of Marblehead—the seedsman—are given, in which the hard pan of some old, well-cultivated fields proved exceedingly valuable as a fertilizer. Such applications may serve a good purpose as a mulch, in addition to its value as a fertilizer.

### CANNING OR DRYING PEAS AND CORN.

Will you please to inform me through your valuable paper, to can green peas and corn? I tried last year and it was a complete failure.

MRS. AMOS TAYLOR.

*Ashby, Mass., July 14, 1871.*

REMARKS.—No, we cannot; but perhaps some of the good housewives who read the FARMER may be able to do so. But why fuss with canning when the corn at least can be dried so easily? When sweet corn is plenty, or if you have to buy, when it becomes cheap, as it usually does late in the season, boil a whole kettle full as you would for the table, then cut the kernels from the cob, place them on tins, and dry them by the stove or in the sun. The oftener it is stirred the sooner it will dry. When sufficiently dry tie it up in cloth or stout paper bags. When wanted for breakfast, soak a mess over night in cold milk, if there is no danger of souring; but if there is, heat the milk before pouring it over the corn. If milk is scarce soak it in water. In the morning put it over the stove and warm it, buttering and salting to taste, and you have a luxury good enough, and probably equal to that successfully put up in cans,—a matter in which others as well as yourself have made "a complete failure."

### LAME PIG.

I have a pig that wants to lie down about all the time, and when it is up seems to be weak across the loins; keeps hoisting first one hind foot and then the other when eating. It eats some but grows very little. H. S.

*Lowell, Mass., July 10, 1871.*

REMARKS.—If you had the bound volumes of the monthly FARMER for the past four years, you would be able to refer to the experience and views of quite a number of farmers with this trouble. Many think the disease is similar to the gout in man, and that it is caused by high living and lack of exercise, and advise some mild physic, withholding food and giving the animal a chance to "root hog or die." If the pig cannot have the "liberty of the yard," give him sods, earth, ashes, coals, lime, &c., in his pen, and don't feed him until he can walk up to the trough and help himself.

This advice does not exactly agree with that of the veterinary editor of the *Western Rural*, who replies, in the number now on our table, in the following manner to an inquiry similar to yours:—

Hogs are sometimes affected with palsy or paralysis of the hind limbs, and its symptoms are loss of appetite, acceleration of the pulse, and swelled tongue. It is generally caused by derangement of the digestive organs, occasioned by the use of unwholesome food, or by a sudden change from dry to succulent food, or *vice versa*. The disease yields to judicious treatment, such as the removal of the predisposing cause; good nourishing food, gentle purgative medicine, a comfortable pen, and moderate exercise. Two or three weeks careful treatment will probably be sufficient to restore them to proper health.

The difference between us is not great, however, and you are at liberty to follow either course—if your pig don't get well on his own hook; which, as a sensible pig, we expect he will do before this sage advice reaches you.

### FIVE COWS DEAD—MURRAIN.

One of my neighbors within three weeks has lost five cows; and has now three more that will probably die. In the first place they cease to give milk—then begins a diarrhœa, discharging blood and what seems to be pieces of putrid flesh. In about two days they commence trembling, are feverish and seem to be in intense distress. The animals attacked have lived from three to eight days.

Can this be murrain? and will the pestilence spread? are questions asked but not answered. Any light upon the subject through the columns of the FARMER would be read with interest.

The drought in this region, at this season of the year, is unprecedented, and the hay crop is fully one-third less than an average. P. JOHNSON.

*Shrewsbury, Rutland Co., Vt., July 11, 1871.*

REMARKS.—The symptoms described are similar to those of Bloody Murrain, but the disease may have a local cause. Has the drought of which you speak deprived the cows of good wholesome water?

Our veterinary adviser is absent this week, and we publish the foregoing at once in the hope that some of our correspondents will be able to advise our Shrewsbury friend, as to the probable cause and nature of the disease, and its proper treatment.

As preventives of the murrain, Mr. Cole recommends giving salt freely, mixed with lime or ashes; also sulphur, and tar; the tar may also be rubbed on the nose and between the horns.

The murrain is difficult to cure. The sick should be separated from the healthy, as the disease is regarded as infectious. Give physic and laxative food when there is costiveness; but when there is diarrhœa, check it, by giving four ounces of powdered chalk, two ounces of powdered anise-seed, one ounce of powdered ginger and one drachm of opium, cut fine, and mixed in a quart of warm gruel.

Mr. Brooks, of Princeton, Mass., bleeds in the first stages, till the animal falters, and, when diarrhœa prevails, gives one ounce of chloride of lime and one drachm of opium. To prevent constipation following, give bran mashes and other laxative food, and if this treatment does not prevent too sudden check to the looseness, give two or three ounces of salts daily. Dissolve the opium in water.

### JEFFERSON COUNTY PIGS—ORCHARD GRASS.

Can you or any of your subscribers inform me where I can get any Jefferson County Pigs? Can you inform the value of Orchard grass for hay? Would it grow on a yellow gravelly knoll?

*Blackstone, Mass., June 14, 1871.* F. O. W.

REMARKS.—The "American Agricultural Annual" gives the names of two dealers in Jefferson County Pigs, both of them in Watertown, N. Y. If any one nearer has this variety for sale it may be for their advantage to advertise the public of the fact.

In his work on "The Pig," Mr. Harris says this breed has been advertised under the names of "Cheshire," "Yorkshire," "Improved Cheshire" and "Improved Yorkshires." These names he thinks indicate the origin of the breed. He says it is said that a large sow of the old English Cheshire breed was taken from Albany to Jefferson County, and about the same time some thoroughbred Yorkshires were introduced into the same neighborhood from England.

The best specimens of Jefferson County pigs as shown by the leading breeders, Mr. Harris says are as handsome pigs as can be desired. Color, white; small, fine ears; short snout, with a well developed cheek; long and square bodies; good shoulders and ham, and very small bones for such large hogs. As compared with the Chester County breed, he says they are nearly or quite as large, have finer bones, ears and snout, and are altogether superior in form, beauty and refinement to any Chester Whites he has ever happened to see.

We are not able just now to add anything to what we have recently published in relation to orchard grass. Whether it would grow on your "yellow gravelly knoll" will depend on conditions of the soil which cannot be inferred from your description. If it is too poor to grow other kinds of grass, we should not expect orchard grass would amount to much on it.

### THE USE OF MUCK.

In your issue of June 24th, I find a short article on the use of muck. I am pleased *always*, to see the subject noticed. My muck bed is my only hope of salvation in agriculture. My experience is largely on the side of muck,—dry muck, not only in the hog-pen, in the barn yard, under the privy, under the sink spout, in my stables, but use it raw, or just as it comes from the bog.

Though absent from home most of the past year, it was my good fortune to be on my farm a few days last summer during the drought. Advantage was taken of the "situation," and five hundred ox loads of very nice muck were put out upon the uplands. Sixty were spread directly upon an old grass field, covering an acre and a half pretty thoroughly. At the present time, indications are that the grass crop will be much better for the muck. It was all taken from basins in my pasture. The water being out of one of them entirely, we had it all our own way, and got it as easily as we could manure from the yard. That being cleaned out, our attention was turned to another basin in which the muck was twelve feet deep. There was some water here, but by the use of a few boards and nails, and tools at hand, a pump was soon constructed, that would throw out one hundred barrels per day. The water was somewhat exhausted, and soon the knolls in the vicinity had each a huge black cap on.

I prefer these small basins, for they afford the best muck. It is composed of the vegetable matter there grown, and the drift from the upland, and has not been washed by the water. But we find a difference, even here, in its effects upon crops. It was decided, by the council interested, to plant a certain patch of land to potatoes, and to manure with clear muck. At this time, they are all up and growing finely, except the ends of three rows,—about what one load would do. There, the potatoes are looking rather puny, and we find there a finer, lighter colored article than that in other parts of the field. We conclude that load was from the bottom of the bed and that it contained more acid than the other. It only needed a little more exposure, to make it all right.

I give you this experience, hoping it may give courage to some doubting Thomas, so that he may at least try his hand at digging for gold in the muck bed. My observations during a recent three month's stay in the West, convinced me that farmers in New England must take advantage of *every circumstance*, or be run off the track on all staple products of the farm. Some future rainy day, I will give you my *theory* on the muck question, which led me so deeply into it. Z. BREED.

*Weare, N. H., June 24, 1871.*

### PICTURESQUENESS OF FARM LIFE.

It ought to be, and doubtless is, a great consolation to the farmer, while making hay under the scorching rays of a July sun, or hoeing corn with a generous portion of one of the planets clinging to his garments,—or employing the bright hours of "incense-breathing morn" in fighting caterpillars, currant worms or squash bugs,—to know that he forms a beautiful picture for the far-off artist or poet. In this respect as in many others, no occupation can compare with agriculture. He must be a genius, indeed, who would make the carpenter,

with plane and hammer; the mason, with trowel and mortar; or the wheelwright, in the midst of a confused multitude of hubs, spokes and felloes, the subject of a picture or a poem. The blacksmith has been a little more fortunate; his work being suggestive of Vulcan and the Cyclops. The *solitary* shoemaker has also been casually remembered. But a noisy shoe shop could hardly be an attractive place for the "sacred nine." It is far otherwise with farm life. Almost every branch of agricultural labor as performed in the days of our forefathers—from the preparation of the soil in early spring, to the ingathering of the harvest in late autumn—has been made the theme of the poet's song.

It is to be feared, however, that the spirit of progress will rather stand in the way of further attempts of this kind. Is not the clatter of a mowing machine, for instance, sufficient to scare away every poetic thought? How different from the noiseless swing of the scythe! But we will try and take a hopeful view of the matter. Perhaps there may arise a class of poets who can meet the exigencies of these utilitarian times, and make even mowing machines and horse rakes subservient to their genius. MATTIE.

*Marlboro, Mass., July, 1871.*

## AGRICULTURAL ITEMS.

—An early spring—Jumping out of bed at four o'clock in the morning.

—Henry Clay's old home, Ashland, has been purchased by the University of Kentucky for $90,000.

—The *Maine Farmer* says, "We observe that the beech trees have blossomed abundantly this year, and the nuts appear to be now well set."

—The cultivation of tobacco in Missouri is falling off every year; not more than one-third as much is raised there now as ten years ago.

—An exchange says that if tree-planting continues in Iowa for ten years at this year's rate, 1885 will find the State beautified with great forests.

—The Missourians appear to have arrived at the conclusion that, for the raising of stock, "blue grass" is the best possible feed.

—According to the amended game laws of New York, all persons are prohibited from destroying or robbing the nest of any wild bird whatever, under penalty of $25 for each offence.

—The State agricultural societies of Vermont and California propose to exchange fruit specimens this year, each sending to the other's annual fair three specimens of ten different kinds of apples, pears and grapes.

—No plant yields anything like as much nutriment from the same extent of soil as the banana. Baron Humboldt estimated that it returns 20 times as much as the potato, and 113 times as much as wheat.

—The Geneva (Ill.) *Republican* says that the potato bugs have entirely disappeared from that neighborhood, and attributes this freak of fortune to the salutary influence of the seventeen-year locusts.

—The *Western Farmer* says: "The probabilities are that more tobacco will be raised in Wisconsin this year than ever before. In a number of neighborhoods where it has not hitherto been grown, there will be many acres planted.

—A Western editor, who doesn't know much about farming any way, suggests that for garden making, a cast-iron back, with a hinge in it, would be an improvement on the spinal column now in use.

—Advices from Louisiana report the State in a deplorable condition agriculturally. The excessive rains and floods have so saturated the ground that it has been next to impossible to work it. Cotton has no stand at all, and the feeble corn crop is overwhelmed by weeds and grass.

—V. P. Richmond says in the *National Live Stock Journal*, that he has removed from the neck of one of his horses eight or more hard and bleeding warts, some of them as large as a hen's egg, simply by rubbing on *fresh lard* twice a-day. Others, he says, have had the same success.

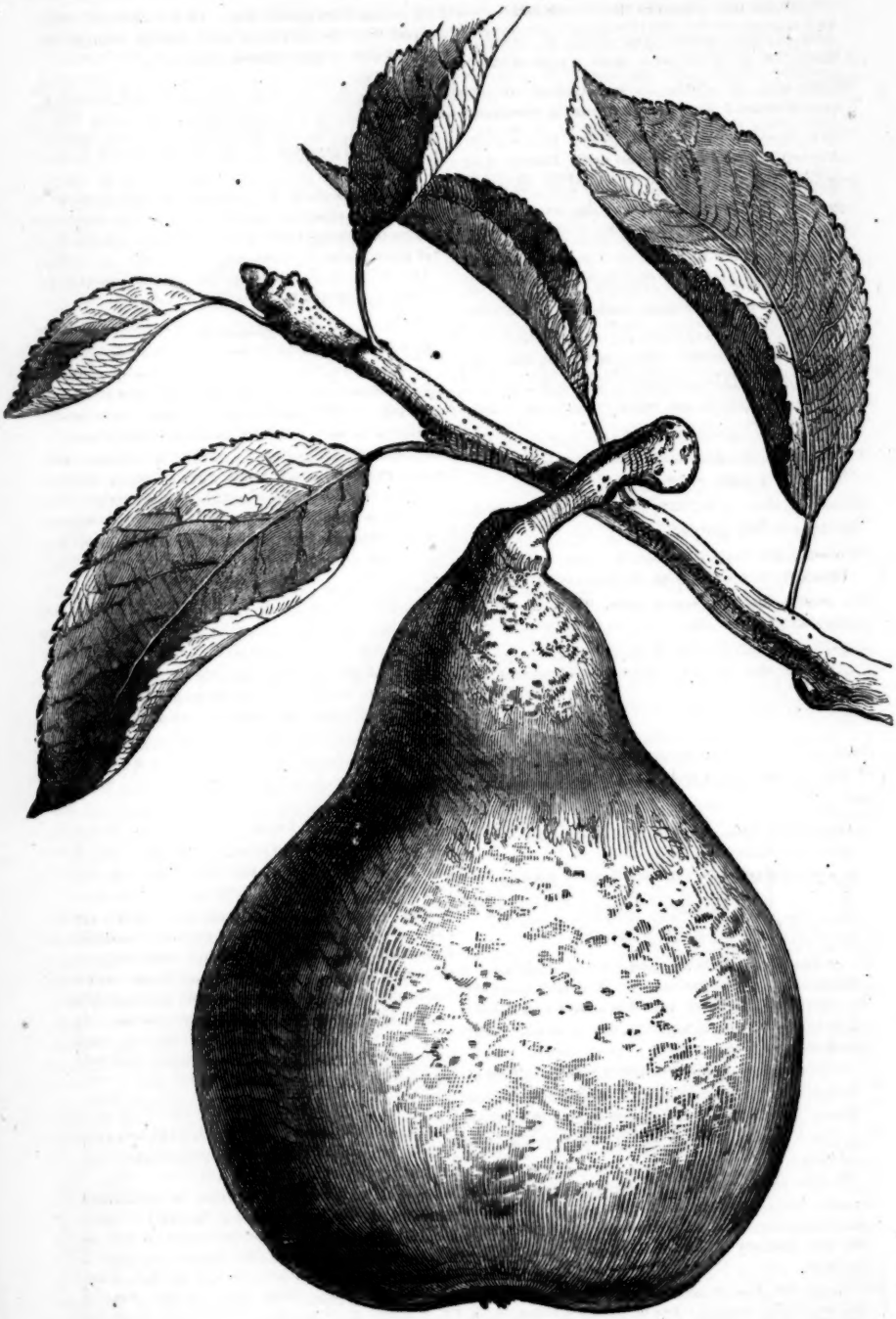
—The Sycamore, (Ill.) cheese factory now uses over 17,000 pounds of milk daily; a larger amount than any other factory in the United States. The Belvidere factory uses 11,000 pounds, the Garden Prairie factory 7500 pounds, and the DeKalb factory 3000 pounds.

—The farm of Senator Chandler of Michigan, near Lansing, comprises 3,087 acres, of which 900 acres are upland and the remainder marsh. The marsh has been drained so that it is comparatively free from water. Experiments are being made to test its value for farming and grazing purposes; and thus far with very satisfactory results.

—To destroy moths in carpets, wring a coarse towel out of clean water; spread it smoothly on the carpet; iron it dry with a good hot iron; repeat the operation on all parts of the carpet suspected of being infested with moths. No need to press hard, and neither the pile nor the color of the carpet will be injured, and the moths will be destroyed by the heat and steam.

—The Portland, Me., *Transcript* tells of a citizen of Kennebec county, who has a goose twenty-four years old. "In March she laid twelve eggs and hatched twelve goslings; when they were two weeks old she began to lay again, the gander taking care of the goslings; she laid nine more eggs, and hatched nine more goslings, making twenty-one goslings in one season, and they are all alive and doing well."

—This is one of the "insect years." The West swarms with potato bugs, chinch bugs and locusts; the Hessian fly and clouds of grasshoppers are devastating the fields of Los Angeles county, Cal.; the black caterpillars are worse in Arkansas than ever known before, and are stripping the leaves of the forest; Virginia planters complain that never were the tobacco flies so numerous and destructive as this season; and throughout the South is dismay at the number, size and voracity of the mosquitoes.



### BEURRE CLAIRGEAU PEAR.*

This winter pear originated at Nantes, France, by M. Clairgeau, and was first introduced here in 1848. Our illustration (see opposite page,) was drawn from a specimen raised by Andrew Lackey, Esq., of Marblehead, who described it as an early bearer, and wonderfully productive; so much so that unless the fruit is thinned its energies will soon become paralyzed if not exhausted, and the fruit inferior.

The following is Mr. Thomas' description of it. Large, pyramidal-pyriform, approaching long obovate, skin yellow or reddish brown, often with a crimson shade towards the sun and brown dots,—not distinctly shown in the cut—stalk short, stout, fleshy, oblique, sunk little or none; basin shallow, furrowed; flesh white, slightly granular, buttery, melting, often with a rich, very good flavor, but frequently poor. November and December. Shoots reddish purple, short, erect and ascending; leaves stiff.

In a list of eighteen pears recommended by the Massachusetts Agricultural Club, we find the name of this pear. In the catalogue of pears published by the American Pomological Society, the Beurre Clairgeau is recommended for cultivation in Connecticut.

It is a very showy fruit. The specimen from which our illustration was made, was one of four grown on a tree three years from the bud.

*Pronounced *Klair-zho*, accent on last syllable.

### MANAGEMENT OF GRASS LANDS.

We are now prepared to say a few words on the general management of grass lands; how we can succeed in keeping up the fertility of our fields so they will yield annually a heavy burden. We have the choice of three methods: first by frequent top-dressing; the second is to break up as soon as the amount of hay diminishes in quantity, plant with hoed crops one or two years and then seed to grass with grain; third, break up when required and re-seed in September. The first is a long rotation, the others short. The top-dressing is cheapest, simplest and most profitable. The rotation with hoed crops requires more labor, which is expensive, and large quantities of manure, to be successful. I have tried the three methods; the top-dressing has proved most satisfactory. There is a slight advantage in ploughing often in the fertilizing matter gained by turning under a grass sward, but it is not so important as the first view of the subject would suggest, for a sward that has received two or three liberal top-dressings is much richer when turned under than a bound-out sward.

Experience is often a hard school-master. I made many mistakes before I hit upon the right course to adopt in managing my grass crop; the system of management which I have adopted, if a practice so simple might be honored with such a title, grew out of some accidental experiments to increase the hay crop; the lessons taught by failures were more valuable than those by success, and I have found it far safer to patiently grow, rather than undertake to jump into the art of a successful farmer.

#### Top-Dressing.

It does not require very rich compost to give large returns in top-dressing grass lands. My way of composting for this purpose is of home-made materials, easily and cheaply manufactured. I prepare it as follows: During summer, as leisure occurs, I cart from twenty to thirty cords of loam, road-wash, muck, leaf-mold, or the waste of charcoal pits, whichever material is most readily obtained, or a mixture of them, into the barn-yard and spread it; the yard has a hard bottom, and is lowest in the centre. I then draw from five to eight cords, as near one-fourth part of the absorbents as I can judge, of rich manure from the barn cellar, which is evenly spread; this is the agricultural yeast to leaven the whole mass. I now plough and harrow thoroughly; if I want more compost I draw more materials, plough and mix as before. I afterwards plough and harrow two or three times at intervals of a few weeks, when the compost is ready for use. I prefer to apply it just before the fall rains, about the last of October or the first of November. It may be spread from the cart or laid in heaps and spread afterwards, which is the cheaper way, where there is plenty of help, but most men would spread it evener, which is a point worth considering, from the cart. I apply as near six cords of the compost to the acre as possible. After spreading, I go over the field with a heavy brush harrow to fine the lumps and work the compost into the grass stubble out of the way of the scythe or mower next season. It protects the roots of the plants from the cold winds and exposure; gives the grass a beautiful early start in the spring, making a quick, luxuriant growth, which shades the ground, keeping it moist in dry weather; it also acts as a mulch in the summer, after the grass is cut, and largely increases the second crop, which is of much importance.

It will not pay to top-dress a bound-out sod; the compost should be applied before the best grasses die out or decrease much in their product, to give the finest results. I like to top-dress after the land has been mowed three years, then every other season till it is broken up again, and my rule is to let

it run as long as it will yield abundantly and the wild grasses keep out. This method, or system, works admirably on moist, natural grass lands and reclaimed meadows. I could cite many instances from my farm record where by applying top-dressing the yield of hay has been doubled for three successive years, when the crop before the application was not more than a ton to the acre. I can in this way obtain four times as much profit from the same quantity of manure as I can by planting corn; my land, however, is better adapted to grass than corn.

**Care of Grass Fields.**

All rubbish should be picked from grass fields in early spring, and a sharp watch kept to destroy large, coarse weeds, as they take room and nourishment from the growing grass and dilute the hay.

**Fall Feeding.**

Feeding mowing lands in the fall is an injurious practice; if there is any amount of growth it is better to mow it, and keep stock out of the fields entirely. When they are fed, the droppings of the cattle should be beaten fine and well scattered in the early spring. No good farmer will allow his fields to be touched with a hoof when the ground is soft in the fall or spring. Feeding mowing fields in the spring ought not to be mentioned; the farmer who practices it cannot be a thinking man, has not capacity of judgment enough to discern his own interest, and could not appreciate a better way if he was taught it.—*Address of G. F. Beede, Fremont, N. H., in Mirror and Farmer.*

## PLOUGHING UNDER CLOVER.

In 1864, I ploughed up a field of clover and planted corn. In 1865, planted corn again, and used the cultivator very freely both years to kill the weeds. In 1866, sowed barley, followed by wheat, and seeded down into clover in the spring. In 1867, mowed the clover for hay, and the second crop for seed. In 1868, mowed it again for hay. After the hay was off we ploughed half the field, and allowed the other half to produce a second crop of clover. It was a wet season, and the second crop of clover grew splendidly. I think it would have made a ton of hay per acre. This clover we *ploughed under*.

The next spring (1870) the whole field was cultivated, but not ploughed, and sown with barley. I could see no difference in the growth of barley on the part ploughed immediately after hay harvest, and that when the clover was allowed to grow and then ploughed under. After the barley, the field was ploughed and sown to winter wheat. So far, I can see no difference in the color or growth of the wheat.

There was no more labor expended on the one part of the field than on the other. The only difference was, that one was ploughed before the clover commenced to grow, and the other after the clover had attained its growth. The presumption is, that notwithstanding the fact that a large growth of clover was ploughed under, there was no more nitrogen or other plant-food in the soil on one part of the field than on the other. The plant-food organized in the clover was simply taken out of the soil, and was merely returned when ploughed under. Had the part of the field ploughed immediately after harvest been harrowed, cultivated, and then ploughed again in the fall, and otherwise exposed to the decomposing influences of the atmosphere, I believe *more* plant-food would have been developed from the soil than on the part where the clover was allowed growth. This probably would not be the case in poor, sandy land; but I have no doubt that clay loams, which abounded in latent plant-food, would become richer from being worked and exposed to the atmosphere than from the mere growth of clover. If there is any evidence to the contrary, I would like to have it produced.

I believe in clover. No one has written more in its favor as a renovating crop. We cannot grow too much of it. But it should all be consumed on the farm, and in addition, the clay-land farmer should "fall-fallow" as much land as he can. I am satisfied, though I admit the evidence is not conclusive, that fall-fallowing is more in accordance with the facts of scientific farming than the practice of ploughing under clover.—*J. Harris, in American Agriculturist.*

## HOME-MADE REFRIGERATOR.

I want to give the readers of your valuable and interesting paper the benefit of an idea about preserving ice in a cheap and convenient manner. Nearly all persons who cannot afford a nice zinc-lined refrigerator or ice-chest keep their ice in sawdust, straw or some such non-conducting material, which is very inconvenient and wastes the ice. We had always done so until last season, and I am satisfied that there are thousands of families who think they can dispense with a refrigerator, but not with ice.

Last season I took two wooden boxes—the first large enough to contain the second and and leave a space of a couple of inches all round, top and bottom, then I bored a hole (one or one-half inch is large enough), in the bottom of each for ventilation and drainage, then made a lid with hinges (leather ones in my case) for each box, placed some slats in the bottom of the larger and placed the smaller box on them, put some pieces at the side to keep the smaller in place, and the refrigerator was done.

This year I improved upon the old one, by making a zinc lining for the inside box out of an old sheet that had done service under a

stove. I nailed on some legs which are placed in tea-cups filled with water to keep out ants and bugs, and also made a rack by nailing some pieces of lath together to put on the bottom, to keep the ice from the bottom. We take fifteen pounds a day, and are never out, while some of our wealthier neighbors, who take the same quantity and have refrigerators "improved," etc., etc., are out half of the time.—*Hearth and Home.*

### TEXAS CATTLE.

A Texan correspondent of the *Turf, Field and Farm* expresses views in respect to cattle raising there, which to some of our readers may be new:—

"Much has been written about this State, and strange to say, even those who are most enthusiastic in their praises of Texas, have invariably named, as the most prominent and valuable characteristic, the very feature which is an absolute curse to the State, and the barrier to civilization and the settlement of the rich farming lands which lie spread out here for hundreds of miles in extent.

"They talk about the Cattle Kings of Texas with great emphasis, and speak of this business of cattle raising as an inducement to bring settlers to the country. Now this is the very thing that keeps the ploughman away from Texas. The cheap lands so often spoken of are here in abundance, but you can't use them unless you have a fortune in your pocket to pay for barricading your corn-patch against the wild cattle which roam every where. If it was not for this cattle business the State would be filled up with farmers who would cultivate the land, raise grain, fence in their grass land and produce beef enough to feed the world. I have examined this Texas cattle business thoroughly, and a more complete burlesque on stock-raising could not be gotten up.

The prairies are failing fast. The continual tramp, tramp of broad horns is wearing the life of the "luxuriant grass" away, and bringing up the weeds by big majorities. A few years ago the wild grass grew up high on the prairies, and when the winter months came the stock found food to keep them going. But now the Ranger's occupation is almost gone, and only a little while longer will his herds be seen roaming over the wilds of Texas."

### FENCE POSTS.

The timber in a tree cut at its best is much more lasting than that from a young tree, or from one past its prime, although the latter may show no sign of decay; and all trees lose rapidly in strength and solidity, and in the same or a greater ratio in durability from the ground up, and from the heart outward. A post that is seasoned is, under the same circumstances, much more durable than one set green; and the nearer the heart, the more lasting the wood in the same tree, if thoroughly sound.

Even a basswood post that is well grown, and thoroughly seasoned, will last several years,—as long as a sappy oak set green.

As to red elm, while it does not equal oak in the natural property of durability, it may be made to outlast that timber, as usually set. I have some posts of elm, set eight years, and they will last, I do not doubt, as much longer. They were made of trees cut for the bark, and were season two years.

I have seen oak posts fail in five years, and have seen them when they stood more than five times that long.

I have heard men say that white cedar was of no value for a fence-post—not so good as oak; and they were right from their experience. They used the young trees, just large enough for one post. They soon decayed, and would not hold a nail; eight-pennys being used.

I have one white cedar post to which a gate has been hanging for twenty years, and it is good yet. I have others, larger, that are good, I have no doubt, for thirty or forty years from setting.

A white cedar should never be cut until it is large enough to saw and make four good posts; and if larger still, better, if, as said above, it is not failing—has not lost solidity, which a cedar holds to extreme age.

A fence properly constructed of such posts, and pine or hemlock boards, with the posts set two and a half feet deep, and duly tamped in with gravel, and the nails used are long tenpennys, will last fifteen or twenty years good; and if at the right time it is taken down, and the posts reversed, and re-built with new nails, it will then last ten or more years longer.

A fence to be durable, must not only be of good material, but be well built; and very often more depends upon the good judgment and honesty of the builder than upon the character of the material used.—*Western Rural.*

REMARKS.—From our own experience we think that the durability of wood depends, in a great degree, on the season of the year in which it is cut; and that the proper time for cutting fence posts is indicated by the remark of the writer of the above, that his red elm posts, which last so well, were cut when the bark would peel.

### PICKLING CUCUMBERS.

No. 1. Take cucumbers, wipe them clean, and lay them into stone jars. Allow one quart of coarse salt to a pail of water; boil the salt and water till the salt is dissolved; turn it boiling hot on the cucumbers; cover them up tight and let them stand for twenty-four hours; turn them into a basket to drain.

Boil as much best cider vinegar as will cover the cucumbers; wash out the jars, and put the cucumbers into them; turn the vinegar on boiling hot; cover them with cabbage leaves and cover them tight. In forty-eight hours they will be fit for use.

No. 2. Pick cucumbers each morning, let them stand in weak brine three or four days, putting in mustard pods and horse raddish leaves to keep them green. Then take out and drain, covering with vinegar for a week; at which time take out and drain again, putting in new vinegar, adding mustard seed, ginger root, cloves, pepper and red pepper pods, of each about one or two ounces, to suit different tastes, for each barrel.

The vinegar must be changed once, as the large amount of water in the cucumbers reduces the vinegar so much that this change is absolutely necessary, and if they should seem to lose their sharp taste again, just add a little molasses or spirit and all will be right.—*Receipt Book.*

Alum will harden cucumbers. To a gallon of vinegar, add one ounce of powdered alum. If the vinegar is put into bottles tightly corked, and set in a kettle of cold water, with hay or straw between them to keep the bottles from knocking together, and allowed to remain over the fire until the water boils, then removed, and kept in the kettle until nearly cool, the vinegar will keep perfectly clear when used for pickles, but it should be added to them cold. Shreds of horse raddish root will prevent all pickles from moulding.—*S. O. J., in Country Gentleman.*

## THE FROG IN THE HORSE'S FOOT.

The frog in the horse's foot is evidently designed for very important uses. If we carefully observe the form and size of the frog in the foot of the colt, from four years old at first shoeing, and then note the changes which it undergoes, as the shoeing is repeated, we shall soon be convinced that a visible departure from a state of health and nature is taking place. At first it will be found large and full, with considerable elasticity, oval in form, at the heels fully developed, plump and rounded. By degrees the fulness and elasticity will be observed to have diminished, its oval form will disappear and it will dwindle into a narrow crack, presenting only the miserable remains of a frog. The question is, Why is this so? I believe that most of the mischief is the unnecessary evil of paring. The smith, in paring the foot, comes to the frog and takes a slice from each side of it, for it presents an even, smooth, clean-looking surface when cut through, that to resist the temptation is more than falls to the share of most smiths.

The reasons for not paring the frog are, first, the frog has naturally less power of producing horn than any other part of the foot, it immediately checks the growth of the frog and prevents the expansion of the hoof, exposing the membrane which secretes the horn to undue pressure. The layer of horn that covers the frog is thinner in substance and more delicate than that of any other part of the foot; and when once destroyed is very imperfectly and sparingly reproduced. As a general rule I would say, let the frog alone.

Perhaps about one in a thousand may form an exception, where a large, loose-textured frog may require a little paring once or twice a year. The frog is provided within itself with two very efficient modes of throwing off any superfluous horn it may be troubled with. The first and most common is the separation from its surface of small, bran-like scales, which, becoming dry, fall off. The other is upon a larger scale, called casting the frog. A thick layer of frog separates itself in a body and comes off to the usual depth of paring.

But it is worthy of remark that there is a very important difference between the two operations. Nature never removes the covering until she has provided another beneath, and there still remains a perfect frog covered with horn, and in every way fitted to sustain exposure; while the knife, on the contrary, removes the horny covering, but is unable to substitute any other in its stead. My advice would be to let the frog alone.—*Western Rural.*

THE WOOL MARKET.—Tedious as has been the time of waiting for a vindication of the wisdom of the wool tariff of 1867, our revenge has come at last; and while we do not desire to add shame to the confusion which has overtaken our revilers, we take this occasion to ask them, one and all, how they like it as far as they have gone? With California fleece at 35 to 40 conts, XX Ohio at 55 to 60 cents, and picklock at 65 cents, and even the "nasty, greasy Merinos" of New York and Vermont State at 50 cents, and with gold at $1.10 1-2 to $1.11, we feel that the tariff is fully vindicated as a measure of fair protection to the American wool grower, and put this opinion on record, on behalf of the gentlemen whose patriotic labors contributed to bring this state of things to pass, of whom the writer, having shared fully in the calumny, desires to share in the glory of success.—*Col. Harris, in Rural New Yorker.*

DANGER IN SOAP MAKING.—The Delphos *Herald* tells of a lady meeting with a serious mishap while making soap at Sandusky City, recently. While the soap was boiling at a lively rate, she turned into the kettle a quantity of cold lye, when the contents exploded with great force, scalding the persons present in a shocking manner. The explosion was instantaneous and so powerful as to leave the kettle entirely empty.

## RAMBLES AMONG THE FARMERS.

ABOUT the middle of June last, we had the great pleasure of visiting several farmers in the eastern portion of New Hampshire. One object in view was, to learn whether farmers do not, as often as persons engaged in other business, succeed in their vocation, and establish permanent and desirable homes. In the FARMER of July 1, we gave an instance, that of the Messrs. HAYES, of Portsmouth, where a farm, stock and tools have been accumulated to the value of about $50,000, and entirely aside from speculation or any other business than that of farming.

There is another style of cultivating the soil, however, which we did not fail to look at and appreciate,—and that is, where means have been secured in other callings, and farming engaged in to gratify the taste and make the world more beautified. A notable instance of this kind is in the estate of the Hon. FRANK JONES, late mayor of the city of Portsmouth. The means, however, which he has so abundantly and judiciously, too, bestowed upon his farm, were all acquired by his own industry and skill in mechanical and mercantile employments. His head and his hands—not capital left by others—have been the power which have brought him affluence and distinction.

All the buildings, fields, fences, gardens, yards, tools, &c., on the farm afford examples for imitation. Lands that for ages had been unproductive for want of drainage and breaking up to the sun and air, were teeming with crops of grass and grain, and paying a handsome interest at $300 or $400 per acre, for agricultural purposes.

In subduing this land, and making it productive, he not only gratifies his taste and secures health, but increases the valuation of the town, and in a double ratio the land of his neighbors lying in the vicinity of his own. He is not only a public benefactor in profitably producing two spears of grass where only one,—or none,—grew before, but in affording an example of what an acre of land is capable of producing, under proper cultivation. Mr. JONES not being at home, we were not able to get details of his methods of culture.

Our next visit was to the farm of Col. JOSHUA PIERCE, of Portsmouth. His principal business through a long life has been mercantile. Highly appreciating rural life and its labors and enjoyments, he has given much time and thought to the cultivation of the soil, rearing of stock, and fruit culture. The farm is now a princely estate. It consists of 1200 acres of most excellent land. Col. Pierce is now nearly or quite eighty years of age, does not often visit the farm, but trusts its management to his agent, Mr. WALTER SCOTT. Six pairs of oxen were wintered on the farm last winter, none of which were of less girth than six and one-half feet, and so on up to nine feet! The whole number of cattle wintered was ninety-four head; eleven horses and twenty-nine sheep. The hay crop last year was sufficient to feed all the stock mentioned above, and 140 tons for the market. This year, Mr. Scott thought the hay crop would be reduced one-half. The Indian corn crop last year was 1000 bushels of ears. Some years 1800 bushels have been raised. He is milking twenty cows this summer, and making butter; milks and turns out before six in the morning, and milks at six at night. The stock is pure Short-horn. A fine pair of oxen near the barn, that had not been yoked, would weigh nearly 3000 pounds.

This farm appeared to us as we suppose many of the estates in England would from descriptions of them which we have read. The fields are large, rich and enclosed with substantial fences, and most of the roads through the farm are lined with fine forest trees. A specialty of Col. PIERCE has been to plant forest trees over much of the farm, even if they crowded the cultivated crops a little, and to preserve all trees with scrupulous care.

We had the pleasure of making two more calls within the limits of Portsmouth, upon Messrs. CHAS. E. MAIN and EZRA A. WINCHESTER, firm of Main & Winchester, Harness Makers in the California trade. One of them is usually in San Francisco. But here, in the beautiful country, made still more beautiful by the means and the good taste which they possess, their families reside; and here they, even, return as the place where

their affections linger, and they find repose from the cares and turmoil of a busy world. I had not time to go over their farms. Mr. Main has 1200 apple trees in one orchard. The soil is a sandy loam, which he dresses with large quantities of sea weed and muck. He has erected a fine barn, has a good garden, and is annually making permanent improvements.

Mr. WINCHESTER we found making a fine avenue to his buildings. He is greatly improving the soil by the use of fish heads and muck, and is showing to neighboring farmers what an acre is capable of producing when under high culture. Our time was too short to allow us to go over the farms of either of these gentlemen, but long enough to be very pleasantly received and entertained by them.

## BEET SUGAR AT THE WEST.

Some six or eight years ago some New York gentlemen visited Europe to learn the process of making sugar from beets and to obtain the necessary machinery and skilled labor to conduct the business on a large scale at Chatsworth, Ill. Some 2300 acres of choice prairie land was purchased and preparations were made which promised to be very successful. In 1866 it was said that the company alone raised beets enough to have produced 450,000 pounds of refined sugar. But for reasons with which we are not familiar, the enterprise has proved unsuccessful, although it was claimed that experiments proved the beets raised in Illinois were as rich in saccharine matter as those of Europe.

We learn by the Madison, Wis., *Farmer* that the Chatsworth factory is to be removed to Freeport, Wis., where the soil is believed to be well adapted to this crop, and where there is an abundance of good water, direct railroad communication, &c. The *Western Farmer* says:—

Work is now in active progress, although it is not expected the buildings and machinery will be ready for operation before the fall of 1872. The citizens of Freeport gave a bonus of $3000 to secure the location of the Factory within one mile of the city limits. Mr. Rosentiel made arrangements with the former company, or rather with Mr. Bunn the chief owner, by which he is to furnish land for and erect buildings to the value of $40,000, Mr. Bunn furnishing the machinery, valued at an equal amount.

The location chosen is on Mr. Rosentiel's fine farm, near the Illinois Central Railroad—a side track being now laid. There will be three main buildings besides the office and other small structures. The largest one will be 191 by 68 feet, and 26 feet high—two stories; the second will be 126 by 30 feet, and same height; the third 129 by 50 feet, and one story high. Under half of the large building is a cellar. The foundations are of very good stone, quarried on the farm; the main buildings will be of brick. Nine steam engines will be used. The water, except for drinking, &c., will be drawn from a creek through a seven inch pipe, 54 rods long.

It is intended to work 50 tons of beets per day, when at full work. From 600 to 800 acres are expected to be devoted to beets. Mr. Rosentiel will devote 150 or more acres of his own farm to this crop. He is entirely confident of success, and this confidence seems to be shared in by Mr. Bunn.

An experiment involving what was then thought to be a large capital was made in Oakland County, Mich., about 1837, which proved a failure. And in 1838-39 the Northampton Beet-sugar Company of Massachusetts, was formed, and received a silver medal from the Charitable Mechanics Association, and a premium of one hundred dollars from the Massachusetts Society for the Promotion of Agriculture, for specimens of beet-sugar exhibited by David Lee Child. And we presume that other unsuccessful attempts have been made to manufacture sugar from beets in this country. But we understand there is a factory in Sauk County, Wis., managed by Germans, that has been reasonably successful from the beginning; and we are not by any means disposed to despair of the final success of this branch of industry on American soil.

*For the New England Farmer.*

## HOBBIES.---CURING GRASS.

I suppose I shall make myself liable to be called an old fogy for the remarks I am about to make; but, nevertheless, I feel disposed to have my say, at the risk of being called one.

The most prominent hobby, just now, among farmers is that of *curing* hay, as the *drying* of it is an inadmissible term. For as long a time as my memory runneth backward, and that is almost half a century, the theory and practice among most farmers has been to use salt, more or less, according to the ideas of the one using it. I always used it but sparingly, as I never felt satisfied that it really was of much use in preserving hay. If it was not properly dried in the field, I put on salt because I thought that it might keep down the heat and also prevent the dust that is so apt to rise from imperfectly cured hay.

But the use of salt on hay soon got to be a hobby. Grass could be cut, just wilted, put in the mow, a good lot of salt applied, and all was right. I never tried that way, because I always found that the hay that did not generate heat enough to melt the salt came out the sweetest and best.

By and by, somebody found out that salt was not good for cattle, and lime was the next hobby; but this had but a short run.

Now the theory is, cut grass after the dew is off, just wilt it, cart it in, put nothing on it, shut up your barn so as to exclude all the air, or at least as much as possible, and though you may have a foot in depth all over the mow that will be rotten, yet the rest of it will be so much better, that it will make up for all the loss.

The advocates of this plan claim that close packing and exclusion of the air is what is necessary. If this be the case, what would be the effect of pressing and baling at once? What a deal of trouble would a certain celebrated speaker and writer on agricultural topics have saved himself, who, after having put into his barn some thirty or forty tons of such undried hay, found in a few days that the steam was coming out of every crack and cranny in his barn, and became so frightened that he had it all taken out and dried and put back again at an expense probably greater than that of putting it in the first time, had he been assured that it would have come out right in the end.

I notice this year that a difference of opinion has sprung up among the advocates of this manner of curing grass. Some say that it need not be packed close; that the air should not be excluded; that the barn need not be shut up; and that you may avoid having so much rotten hay on the top by admitting some air. Would anybody have arrived at these conclusions if the close packing system had proved to be as successful as has been claimed?

Since writing the above I have been reading the remarks of a Doctor P. Simonton, of Maine, on the subject of curing hay, in which he refers to what he calls the old method, and which he said originated in the days of wooden pitchforks, when the hay was raked up and spread out over and over again, till all the seed dropped out, the leaves fell off, and all the fragrant aroma and nutrient juices were gone forever. This way of curing it he very justly calls the poorest of all ways, and then goes on to say that "from all we can see and learn it is the one still most common in practice."

He then refers to another method so nearly like the editorial on the subject published in the FARMER of June 24, which I think a most excellent article, that it needs no further notice.

He then refers to what he calls the third method,—that in which the grass is just wilted and put in and allowed to heat and cure in the mow. Though he does not profess to have any practical experience himself, he refers to a statement of a Mr. Larrabee, of Searsport, to confirm the truth of his theory. Mr. Larrabee says that he mowed two tons of grass after the dew was off, and put it on a scaffold in his barn, and that was all he did to it. "It went through a process of heat and sweating which caused the upper part, some ten or twelve inches thick, to spoil for eating purposes. All below this proved excellent hay. Some of the leaves turned black, but nearly all of the useful parts which are lost by the drying method being saved, it was very rich in fodder and was much better relished by the stock than common dried hay."

Now it seems to me that Doctor S. was very unfortunate in his selection of a case to illustrate the truth of his theory. If these two tons of hay had been put on a scaffold twelve feet square, this rotten layer would measure 144 cubic feet. Allowing 600 cubic feet for a ton, it would weigh 333 pounds. This at $35 per ton would come to $5.72. Now if a mow of ten tons is going to spoil in the same proportion, it will be 1660 pounds and a fraction, making $25.05, to say nothing of the extra labor to handle over water enough to rot this amount of hay. This amount of money would, in my opinion, richly pay for the extra work of drying the hay according to my idea of curing hay.

One of the objections in my mind to the new way is the necessity of handling grass with so great an amount of water in it. It is heavy stuff to pitch and cart. I think it much better to evaporate this water in the field than to take it to the barn to go through the process there.

I do not speak unadvisedly on this matter. I find by actual trial that one hundred pounds of grass that had laid seven hours in the sun on a good hay day, and was afterwards treated in every other way as was the balance of the lot, lost in drying, forty-six pounds, leaving fifty-four pounds of dry hay in such a state as I would be willing to mow away ten or fifteen tons together. Now as I cut usually about 100 tons of hay, cured as I cure it, I should be obliged on this new plan to handle an additional forty-six tons of water, which it seems to me is not very economical, as in addition to the extra labor, the evaporation of this large amount of water would greatly injure the building.

Then again, I keep a stock of thirty-five head of cattle and horses, and they are stalled at night. It seems to me that it would be subjecting them to an uncomfortable vapor bath to have the barn shut up tight all through the hot weather while the grass is going through the sweating process.

Once more, my barn contains 3600 square feet of scaffold and mow room. Now if I have got to have one foot of rotten hay all over the surface of these mows, it would equal six tons of dry hay, and at $35 per ton, would be worth $210; the price to be paid for getting hay on the new principle, to say nothing of the unpleasant smell that would arise from such a mass of rotting vegetable matter shut up in a tight barn.

Another objection is, that it is very inconvenient for me to fill a mow, in one or two days, of the same or nearly the same quality, which seems to be a requisite of the reformed practice.

The farm under my care is divided into some twenty lots, containing in all about eighty acres. Of course I have different kinds of hay,—some horse hay; some for the cows, some for the oxen, and some for the market. I make such a division as I am able in the field, and as I generally make clean work as I go, it is not often that I can get enough of

one kind of hay to fill a mow in one or two days; and should a wet day intervene, or if you don't get full Saturday night, you are all ashore; as it will not do to let a mow remain over two days without filling.

Once more, I wish some chemist would subject some of the hay to a chemical analysis and tell us whether the starch and sugar undergoes any change in going through the sweating process.

Thus, Mr. Editor, I have given, in my imperfect way, my views of this new method of curing grass. If you think they are worth anything, use them; if not, consign them to the waste basket. J. L. HUBBARD.

*Peabody, Mass., July 14, 1871.*

---

*For the New England Farmer.*

## OUT-DOOR GARDENING.

June played at "hide-and-seek" with us, in these northern latitudes, granting us only a glimpse of her sunny skies and balmy airs, but in these summer months the sun shines, with an almost overpowering warmth; and all nature rejoices in its rays. The "heated term" is a necessity, if we would enjoy the rich and rare flowers and delicious vegetables of the summer months.

Our roses have been perfectly exquisite! Never were roses seen so rich and rare in this "north countree!" A moss rose stands over six feet high; and as we write, is perfectly covered with most lovely roses and buds. The latter, with their mossy veil, are very beautiful, and the full blown roses are not without their charm. The plant had been cultivated several years, but not until the "Grafton Mineral Fertilizer" was appiled to its roots did it make any headway; then it grew wonderfully, and in the last two years has grown four feet. Every spring it is cut back from a foot to eighteen inches, and the puny branches thinned out; then it gathers up fresh strength, and puts forth its buds and leaves in renewed beauty. One hundred and twenty-five roses have bloomed upon it this season.

All lovers of roses should obtain some of this mineral powder which gives renewed life to all old rose bushes; and increases the vigor and strength of the new plants. Sixteen new Hybrid Perpetual and Tea Roses adorn our garden this summer, and they will soon bloom again in beauty and glory. They were all cut back after blooming in June, and now their promise is great.

Roses require close pruning to blossom in perfection; it seems very hard to cut off the tall branches—but the finest blossoms are always produced on the stalks thrown up freshly from the roots. Look at your pet roses, my fair friends, and learn this truth, and profit by it.

Cut down the old wood within six or ten inches of the ground, and see how they will repay you for the sacrifice of their branches. Not a slug, or a rose bug, has dared to touch a leaf or bud of one of our darlings. Early in the season the mineral powder referred to above, was plentifully scattered over all the leaves. Two more applications were made for fear the devastating foe might make its appearance, and their foliage is as beautiful as in the first dawn of creation. The culture of the rose has been neglected of late, on account of the ravages of this insect, but it can be successfully removed with very little trouble; besides the use of the "Fertilizer" is very beneficial to the growth of the plant.

There is not a flower in the garden that possesses more charms than the rose; still, the pink also commands much admiration. These flowers were first brought into notice in 1270, by Louis the Pious. He made a crusade to Tunis, and was delighted with the delicious fragrance of the pink. Some of the plants were taken home and cultivated with great attention. It was called Tunica at first, from the spot where it was discovered, but on account of its spicy fragrance it was named Caryophyllus. Since that the pink has become domesticated in the south of France and Italy.

King Rene of Anjou was a devoted admirer of the flower, and he cultivated many varieties of it; he considered it valuable as a medicine. Not until 1597 was it grown in England, and it was introduced then by the Poles. We are indebted to the Spaniards for its introduction into this country.

In 1700 the Dutch took it up and cultivated it with such care that they produced over 300 varieties. A perfect flower must be a fine color, with an unbroken calyx—if that bursts open its beauty is greatly injured. Carnations and Picotees are both *indispensables*. They can be easily raised from cuttings or layers; and the soil which grows them to the best advantage, is a mixture of loam, black leaf mould, well-decayed stable manure, and a little sand. These flowers are often styled florists' flowers. This term is usually applied to those plants that have been improved in form, color, or size, or in all three combined. They are, in truth, the productions of art, having been raised by high cultivation and patient care from insignificant flowers.

Any one who will compare a single and a double pink, will be struck with the great difference between the same flower in a natural and artificial state. Florists' flowers are one of the greatest proofs of man's skill and ingenuity which the vegetable kingdom can exhibit. The taste for Florists' Flowers in England is supposed to have been brought over from Flanders, when its citizens fled from the persecutions of their rulers.

The Flemish weavers brought with them roses, carnations and gilliflowers as early as 1567, and the rare gardens in many parts of England are indebted for many of their gems to these manufacturers.

The French refugees introduced the fashion

into Scotland, and wherever they settled beautiful flowers are now found.

Since the beginning of this century, however, great improvements have been made in floriculture, and our florists vie with those on the Continent. All annuals have been greatly increased in beauty. Compare the tiny crimson Petunia, which was cultivated over thirty years ago, with those now growing in many a garden, and mark the difference.

In our garden are growing "*Buchanan's Hybrids*," which are rarely beautiful; striped like a banner, blotched like a balsam, double as a rose, and of all the shades of pink, crimson, purple and white; forming of themselves a bed of flowers that quite equals the plot of verbenas near by.

The Petunia can easily be propagated by cuttings, at almost any season, by inserting them around the edge of a pot filled with a light, sandy soil, which should be kept perfectly wet. But the best season for this operation is in August or September, as then they will strike root more vigorously and be ready to bloom in the window garden. These flowers love warmth, but do not like cold winds, nor the heat of the noonday sun when it scorches.

Equal parts of well rotted manure, sand, and good garden loam will make the best compost to grow them to perfection. They are easily raised from seed; and if very fine varieties are procured one season, the next spring they will sow themselves and you will have thousands of plants. Last summer we saw a bordering of the rarest Petunias, which extended entirely around a vegetable garden. It was a very lovely sight, and this last spring a multitude of plants sprung up all over the beds. Literally, thousands of plants were given away. Those of our readers who have not seen the new varieties of this common flower can form no idea of its beauty. The double varieties are nearly as fragrant as the Carnation, and are quite as perfectly striped, and blotched, and many of them equal the delicate traceries of the Salpiglossis.

Double Zinnias are now as effective a flower as one can raise; their perfectly cupped petals have quite eclipsed those of the Dahlia. The white varieties are now an established fact, and are very beautiful; they are of a paper whiteness, and each petal is perfectly formed. These plants should be pruned, and pinched in, to grow in perfection, and not allowed to straggle as they please. A well grown plant, well-trained and pruned, is as fine an object as the flower beds can exhibit. This season, striped Zinnias are the "novelty;" beautiful pink leaves will have a narrow stripe of white down the centre of each, making a very lovely flower.

Now is the season for extracting perfume from the sweet flowers. Gather quantities of rose leaves, sweet geraniums, heliotrope blossoms, carnations, sweet peas, and any fragrant flowers. Place them in a small earthen jar, and strew salt plentifully between the layers of leaves and blossoms. Set the jar in the cellar, tightly covered up and let it stand for six or seven weeks. Then uncover it, and strain out through thin muslin all the liquid that is in it, squeezing the flowers thoroughly, after the first straining.

Bottle the small quantity of fluid obtained, and set in the sun for four weeks, letting it remain out all night in the dew. It will contain the essential oil of the flowers, and three or four drops of it will perfume a whole quart of water or alcohol.

The backward season has prevented the Zonale geraniums offered to S. A. R. from making rapid growth; so she will be obliged to wait for the cuttings until September. We do not keep any plants or cuttings for sale; but when we know of some one person who has a great affection for them, we are glad to give them away. J. B. W. shall have some at the same time that the others are sent. We have some thirty-eight Zonale and Tri-colored geraniums coming forward, but all the plants are small, and will not bear cutting back just at present. They will be sent "without money and without price," but from the feeling that "makes us all akin." S. O. J.

---

Cotswold Sheep.—Messrs. Jones & Clark, of Barre, Vt., write to the *Mirror and Farmer* that their Cotswold lambs were dropped the last of March and first of April, some of them weighing 12¾ pounds; the 20th of June they weighed 75 pounds. Yearling ewes, this spring, had wool 12 inches long, and crosses with Merinos showed a length of staple 7 inches. They sold a Cotswold lamb last fall to one of their neighbors to cross with fine wools, and he has already, at this time of year, been offered $4 per head for his lambs for mutton. These lambs were dropped the first of April.

So much has been said against crosses with fine wools that we have experimented until we have become satisfied that with the *right care* and *blood* for a buck it will prove a perfect success for mutton, also for wool, as it is fine and of good length. Our ewes averaged six pounds of washed wool; have sent it to Boston for combing. The buck that sired our lambs sheared 15½ pounds and weighs over 300 pounds.

---

Fattening Cattle on Grass.—In Great Britain and Ireland the wealthiest and most independent farmers are those who occupy large farms of good grass land and who fatten and sell annually large numbers of cattle. This class of farmers are called graziers; they keep very little of the land in tillage, do not winter large numbers of cattle, but buy two or three years old heifers and steers in the spring, keep them on choice pasture during

the summer and autumn, and sell before the animals begin to loose flesh late in the fall. The vast herds of Texan cattle are sometimes managed in a similar way, being purchased when in a low condition and driven on the rich and succulent prairie grass until they have become nearly fat. Farmers who have good grass land should devote at least a portion of it to fattening stock; good two or three year old heifers and steers kept on a rich pasture for six months would probably pay better than inferior tillage. The money would all come together, and the cost of transportation, compared with that of the cereals, would be trifling. Every farmer should fatten all his young stock that are not required for the dairy or the yoke. Selling stock of any kind before they are properly made up for the market is very bad management, and a great deal of money is lost by farmers every year in this way.—*Western Rural.*

---

WHY CATTLE NEED SALT.—A correspondent wishes the reason why cattle need salt. It is because phosphate of soda must be furnished to the blood, whereas it is phosphate of potash that exists in grains and grasses grown on soils deficient, as most soils are, in saline or sodic compound. When salt is taken into the animal system it is partially decomposed. Some of its chlorine unites with the potassium of the potash while the liberated sodium is oxydized to form soda, and this combines with the phosphoric acid from the potash phosphate to form phosphate of soda. Soda also exists in milk. It is this which gives the fluid its slightly alkaline taste when first drawn. If this be absent, as when cattle are not supplied in some way with salt, the milk is unwholesome. Cattle are apt to prefer grass grown on lands top-dressed with two or three hundred weight of salt to the acre, for the reason that the salt renders the grass sweeter, more tender and more succulent. The weight of grass grown on salted land is, however, likely to be diminished in proportion, as rankness of growth is prevented.—*J. A. Whitney, in Rural New Yorker.*

---

## AGRICULTURAL ITEMS.

—The effete aristocracy of Old England can yet read a lesson to the matrons of New England. The first twenty-four names in the Peerage show families of 272 children, or more than eleven to each bloated aristocrat.

—An Illinois paper recently advertised:—"Wanted, a good rain; one that understands the business thoroughly." We are ready to give the one that worked all day for us on the 18th of June, a first rate recommendation for the situation.

—The St. Louis *Rural World* gives an account of the death of a son of Mr. Schofield, of Fall Creek, nd., by inhaling Paris green which he was preparing for application to potato vines. He died in a few hours after inhaling the poison.

—The annual cash income of the Cornell University is $125,000. Six new Professors are to be added. The Professorship of Agriculture is filled by C. H. McCaudless, lately Assistant-superintendent of the Royal Agricultural College at Glasneven, Ireland. Other eminent European teachers will probably be secured. The Institution is crowded with students.

—J. L. Henry, a practicing physician at Boyd Station, Ky., writes to the *Country Gentleman* that by doctoring his own horse he has learned that the following is as nearly an infallible remedy for bots as any used. Take one Stricknos Nux Vomica Bean, cut in pieces, make one quart of tea; give one pint; if not relieved in from thirty to sixty minutes, give the other pint.

—A recent writer states that he effectually disposed of certain weeds in the lawn, among them horseradish, "by cutting with a spade two or three inches below the crowns, and pouring on the part left in the ground a little kerosene. The sod was dropped back, and the horseradish failed again to put in an appearance. Any troublesome weeds can easily be killed in this way without injuring the grass."

—A correspondent of the *Country Gentleman* says if copperas and saltpetre water are used around pear trees, the trees will show the effects in a large yield of fruit. He tried this on a Bartlett pear tree that had yielded no fruit for two years previous; that very year it yielded 155 large, fine pears, and the following year 250 large, fine ones, and it is still doing finely. If pear trees want iron which most soils are deficient in, sulphate of iron, or copperas, is a good way to supply it.

—A writer in the Toronto *Globe* says that for the past six years as soon as grass can be cut he spreads a quantity of newly cut grass under his gooseberry bushes and lets it remain all summer. That treatment combined with very high cultivation and close pruning, has been a complete preventive of mildew for the last six years. He has had every year for that time splendid crops of large sound berries; some of them nearly as large as small plums.

—Ducks are said to do good service in exterminating the potato bug. A gentleman of Piqua, Ohio, put a pair of Muscovies into his potato patch which was literally swarming with bugs. The ducks ate the bugs with such avidity that the latter were soon exterminated, and the patch has not since been troubled with them. So say the papers; and we hope it is true, but as all accounts that we have seen agree that poultry will not touch a Colorado potato bug, we fear there is a mistake somewhere in the statement.

—A correspondent of the New Orleans *Rural Southland* says, "the rains during the whole spring have been almost constant, with every now and

then a terrific flood. The consequence is our crop prospects are gloomy enough. Our cotton has been one-third, at least, destroyed by the rush of waters and beating rains. And now the grass and weeds are getting the mastery, it being impossible to plough or even, in many places on the low lands, to walk through the fields without bogging a foot in the soft, mushy land." He closes with the remark "still raining!"

—A correspondent of the *Southland* objects to the introduction of the Chinese on the ground that they are a race of people whose moral principles are not only dangerous to society, but would tend to the multiplicity of infinite social disorder. Much of their doings and habits will not admit of publication, and would not long be permitted to exist in any civilized community. It is nonsense to talk about the Chinese living on cheap rations and low wages. When in "Rome they will soon do as Romans do."

---

COLORADO POTATO BEETLE IN MASSACHUSETTS.—Hon. M. P. Wilder informs us that this long dreaded scourge of the potato field has been found in the town of Worcester, whither it probably either stole a ride on the cars of the Western railroad, or was introduced by some carpet-bagger. We understood Mr. Wilder that the State Board of Agriculture were contemplating the adoption of some action with a view to "stamping out" the pest. We are not informed as to the extent of the foothold the insect has secured, but we should certainly advise a most earnest endeavor by hand picking, by poison, by fire, and by every means in their power, to check its further extension in our State.

---

TALL GRASS.—We have received from Mr. E. Richardson, of Fitchburg, Mass., a bundle of herdsgrass from five feet to six feet two inches high, with some blue-joint or fowl meadow and witch grass nearly as tall. It grew on a river intervale, on to which the stream, in the great flood of 1869, carried a covering of earth, and from which it washed away an acre or two to enrich some other meadow. Unfortunately we have mislaid the note accompanying the grass, and therefore are unable to make a fuller statement of the particulars of the mammoth crop of which we have a specimen.

---

A FARMER'S PILE DRIVER.—A correspondent of the *Toronto Globe* saw a farmer at the West driving fence posts with a home-made pile-driver. The ram was the butt of an oak log, six feet long and sixteen inches in diameter and was banded at the lower end by an iron hoop. Grooves were cut in it on each side so as to admit of guides. The frame in which the ram was raised so as to fall about twelve feet, was of scantling only 2x6 and 3x3 inches, with the exception of the sills, which were stronger, and made of hard wood, to facilitate moving about—an operation which was performed by the same oxen that raised the ram. About three blows drove the post nearly four feet into the earth, and almost all went quite straight. On the whole, it was considered a great success, and saved an immense deal of labor.

---

## EXTRACTS AND REPLIES.

### SUMMER CARE OF STOCK.

Our farm stock is now at pasture, and I have thought that some suggestions from my experience with cattle while at pasture, might be acceptable to some of your readers. Much has been written about the winter care of stock, and but little of its summer management.

When I began farming, nearly forty years since, I had but one cow and a yoke of oxen. I had one lot only for their pasture. Afterwards I made an addition to my farm and to my stock also; and then I thought I would make different arrangements in regard to pasturing. I went to work and divided my pasture into several small lots, by fences.

### TRIED CHANGING PASTURES.

I thought this would be an improvement, for several reasons. I could turn in to the low land coarse feed first, believing stock would eat it better when it was tender, and I should also save my better feed until it got well started, by which the good feed would be better all summer.

I had as many as five separate pastures. I could let down my bars at the barnyard, and send the stock into whichever lot I desired. I generally changed them from one lot to another weekly. This allowed each lot a growth of four weeks. Of course the feed would get a good start, generally quite rank. But I soon found that this plan did not work well. My cattle having the fresh feed of a new lot every week became uneasy after the first few days, and if I went near them they would run and bellow for a new lot; for they remembered that I had been in the habit of letting down the bars once a week and turning them into new feed. On noticing this habit, I adopted the policy of letting down the bars to a new lot when the cattle could not see me. By this means they became more quiet.

I think my pastures did produce rather more feed, managed in this way, but I found there were disadvantages attending its practical operation. After four week's growth the feed would be rank and abundant, and on being turned into a fresh lot the cattle would eat too much, and so overload their stomachs as to cause scouring. As a preventive and remedy for this I commenced feeding them old dry hay. They took it with a relish and I thought it was very beneficial to them.

After a few year's experience in managing stock in this way, and in keeping in repair the fences necessary to divide my pasture into five lots, I abandoned the plan, removed the division fences and for several years past have kept all my cattle in one lot.

### GONE BACK TO ONE PASTURE.

My pasture ground embraces a variety of soils, from the sandy knoll, where the sweetest grasses grow, to the muck-bed, where the vegetation is coarse and rank. Enjoying a range of three-fourths of a mile, my cattle can lie in the shade of pine trees over one hundred feet high and ten feet in circumference; or browse the young sapling of a great variety of trees and bushes, which are so thick on about an acre of the pasture that it is almost impenetrable, yet the cattle go through it and seem to enjoy the currying their hides get from the interlocked branches, and the shade the dense foliage affords. In this lot a spring of pure

water gushes from the hill-side which forms a sluggish stream that flows through sand and mud. Here they can drink, or if they choose they can sip from a small pond where frogs peep, turtles crawl, and serpents charm, or they can wait till they come to the yard and quench their thirst from a trough filled with water drawn from a well eighteen feet deep. In the pasture there are stumps on which they can rub their noses, necks and foreheads, and keep their eye-winkers and forelocks in order.

HEALTH OF ANIMALS.

With such a variety of food and drink, of sunshine and shade, of dry soil and wet, of tame and wild grasses, I have never had an animal sicken and die under my management. A few years ago having a cow somehow ailing, I called in an old man who pretended to be a cattle doctor. On examination he said she had got the horn ail and she must have some tobacco steeped and give her the juice. He gave her what he called a dose, I should think nearly a pint. The cow staggered, dropped and died in about ten minutes. So much for my experience with tobacco, which thoroughly satisfied me of its power! If the cow had been let alone, I think she would have got well.

GENTLE TREATMENT OF STOCK—HAY IN SUMMER.

My cattle like my company. When in the pasture they will follow me until I leave the lot; and, as a general thing they come up to the barnyard every night about sunset, and in their way call for a lock of hay. Though I give them all they want, they take but a few mouthfuls, which satisfies them, and I am confident it does them a great deal of good. It keeps their bowels regular, and they thrive well and are happy. They do much better than they did when I changed pastures once a week, for now they have the change of feed every day instead of once a week.

Cattle need kindness, and they pay well for it. I can handle my steers and others as I please. They will come up to me when I am milking and invite me to play with them. I am obliged to scold sometimes to keep them away, but they know nothing about being whipped.

SOILING.

The time I think is not far distant when soiling cattle will be the most profitable where most of the farm can be cultivated. Provide a small lot for them to run in; feed green fodder; save all the manure, and our farms will grow richer; better and larger crops will be raised, and more attention will be given to looking after the cattle in the summer months. M. L. GOODELL.

*South Amherst, Mass., July, 1871.*

---

THE BYFIELD TOWN FARM CROP OF CORN.

I regret to have annoyed your correspondent, Mr. J. L. Hubbard, by crediting him (as it happens by mistake,) for the great corn crop on the Byfield Town Farm at one of the Cattle Shows in Salem, Mass., between the years 1843 and 1850. If he will take the trouble to examine the reports of the Fairs of Essex County for the years mentioned, he will find in one of them that I am credited with having raised ninety-two bushels of corn per acre, and the Byfield Alms-house farm one hundred and sixteen bushels, to which was awarded the first premium.

If Mr. Hubbard wishes to do as *well*, he can plough in a heavy dressing of manure, then put a shovelful of old compost in the hill, on good soil that will give him two and a half tons of hay to the acre. H. POOR.

*Long Island, N. Y., July 18, 1871.*

REMARKS.—At the risk of getting our head punched by one or both of the parties to this big-crop controversy, we venture to step in and say that we have been examining the records referred to, and find that, in 1849, Mr. Joshua Foss of Byfield, Mass.,—we saw nothing said of the Alms-house—claimed to have raised on one acre of land 205 bushels of ears of corn; equal to 102½ bushels of shelled corn. It was a medium sized eight rowed variety; the rows were three feet apart, hills two and a half feet asunder, with three stalks in a hill.

At the same time Mr. Henry Poor made a statement of a crop of *ninety-three* bushels of shelled corn to an acre—land measured, and amount of yield determined by shelling two bushels of ears. His was a large variety, and he inquired what he should do with the buts of stalks which were so large that he had been advised to sell them as cord wood.

Our correspondent J. H., of Shrewsbury, Mass., who has experimented carefully as to the yield per acre, and finds seventy-five bushels a great crop, says that 200 ears of the large varieties will make a bushel when shelled, but of the smaller varieties 300 or more ears are required. Assuming that of the medium variety raised by Mr. Foss, 250 ears were equal to a bushel of shelled corn, it appears by our figures that each hill of three stalks must have produced 4½ ears, or three good ears for each two stalks. Did they do it?

---

GARDEN AND ORCHARD.—THE DIFFERENCE.

*Jones* has a noble kitchen garden,
And tends it too, as well;
It full supplies his wants, and then
Has much to spare, or sell.
*Smith* "never was much of a hand
To bother with such truck;
And then he can't find a spot of land
But's weeds—has no luck."

*Jones'* orchard is a pleasant place,
With thrifty, handsome trees,
With large and lucious fruits that grace
The bough, and kiss the breeze.
*Smith's* is a sight to see—and seen
Leaves sadness on the heart;
A scraggly, unkempt, unsightly screen,
With which we're glad to part.

*Maine, 1871.* J. W. L.

---

SOILS FOR MUCK.

I am a constant reader of your paper, and have been much interested in the different communications on muck. From all I have seen and read about it, I have come to the conclusion that it is not so much in the muck as in the soil to which it is applied. If you have a piece of dry, sandy land, muck of any kind will be a great benefit to it,—the more muck the better. But on land that is swampy or wet and heavy it will be of little if any use. Such a soil should have sand carted on to it and ploughed in, and by mixing the two different soils together a great improvement will be effected. I am acquainted with a piece of land in a village that is nothing but muck and bog. A good part of it is cultivated. In the first place sand is carted on and mingled with the surface soil. Here they have as good gardens as there are in the village. Hence I am satisfied that muck should be used on light, sandy soils, especially if it is applied in a crude state. A correspondent in a late number of the FARMER spoke of using it with good results on a gravelly knoll. This also goes to corroborate the

correctness of my theory. But muck in a crude state, or fresh from the bog, will be of little benefit on some kinds of land, while on others it will do much good. Hence the different results of experiments, and consequently different opinions of farmers on the subject. Muck is of little if any use as a manure, but as an absorbent it is valuable. If drawn into the hog yard and left for the hogs to root over and mix with straw and weeds that can be pulled and thrown into the yard, a great deal of manure can be made. C.

*Keene, N. H., June 28, 1871.*

### COLORING BUTTER.

We that have white grass pastures this dry weather cannot make as yellow butter as we wish to, though we give our cows two quarts of corn meal a day. We want to inquire through the FARMER for the best and healthiest coloring. Carrots and squash are not to be had just now, and we are told that annotto is a deadly poison; so what can we use with safety? Will you please give us the definition of annotto from Webster's Unabridged, and oblige, an INQUIRER.

*Jaffrey, N. H., July, 1871.*

REMARKS.—The definitions of the word annotto, or annatto, annotta, anotta, arnotto, arnatta, arnotta, &c., as it is variously written, as given by Webster and Worcester, are nearly the same; Worcester cites Ure for authority, and Webster, McCulloch and Loudon. Webster's definition is, "A species of red or yellowish-red dyeing material prepared from the seeds of a tree (*Bixa orellana*) belonging to the tropical regions of America."

Some dairymen, we know, have objected to the use of annotto, but we were not aware that any body considered the pure article at all poisonous. Mr. O. S. Bliss, of Georgia, Vt., Secretary of the Vermont Dairymen's Association, says "there cannot be any possible objection to its use. It is a purely vegetable extract, and the Brazilians, who manufacture it, make use of it to tint very many of the most delicate and luxurious dishes served at their repasts. We have a friend who has travelled extensively in South America, and who is acquainted with its nature and the process of manufacturing it. He speaks of it as analogous to our butter in some respects, one of which is that the really pure article is of a comparatively imperishable or self-preserving nature, and that it imparts to milk, butter and cheese, in some degree, this preservative principle, while the impure grades, like the less pure grades of butter, are lacking in this principle, or rather that they have within themselves germs or spores of putrefaction and decay, which, after a longer or shorter time, grow and spread, producing injurious results in the mass. There are very low grades which are used for mechanical and manufacturing purposes only. From what we can learn from various reliable sources, there is not the least difficulty about getting a good article of annotto if the purchaser is willing to pay for it, and makes application for it to some well-established regular dealer of good reputation. It is said that there is very great difficulty in distinguishing the better from the medium grades, and that the most prudent houses rely mainly upon the reputation of certain brands, and the character of the parties from whom they make their purchases.

Many persons affect to be very averse to the use of colored butter, but we have never seen one yet who does not like good, rich-looking yellow butter better than a poor, lardy, white article, and would not eat a nicely colored article much more satisfactorily than the other, provided, of course, that he does not know that it is colored; and the smartest of the class are unable to distinguish the colored from natural butter of the same shade of color. It is manifestly better policy for the producer to conform to the public taste in this respect than to attempt to educate it."

### COLORADO POTATO BUG.

The Colorado bug that destroys potatoes, when once seen will be remembered. As we have nothing of the kind to compare them with in this section, I will try to describe them so that all can recognize them at first sight. They are a round, oblong bug a little smaller than a yellow-bird's egg; both ends are nearly alike, save a little head on one end from which the *ten stripes* start and run lengthwise of the body. These stripes resemble those of the little common potato bug, in color. They are a very mean looking bug, and decidedly the filthiest pest I ever saw of the bug or worm order. When they come from the ground they are of a bright orange color, not unlike the little crabs often found in oysters. Some papers are recommending poultry for their extirmination. Poultry will not eat them, as they are very poisonous even to those birds whose food consists of beetles. One bug will kill a bird of that species in a few hours. As they are very voracious eaters, they void a great deal; hence they are very filthy. They will crawl all about the house in quest of food, and they leave their mark on the carpet if you chance to step on one. They are not confined to the potato wholly for a living. The tomato and all of the night-shade family and most of the tender shrubbery about the house and flower-garden furnish them with a living. The only remedy known West is to crush, burn or poison them by sifting Paris green on the vines. To burn them they gather them by holding a pan under the vines and shaking them into it. T. B.

*Addison County, Vt., July, 1871.*

REMARKS.—From recent statements in western papers it appears that poultry do sometimes eat these insects with impunity and apparent relish, though at first they generally refuse to do so. It would seem also that extravagant statements have been made as to their poisonous nature.

### IRRIGATION BY DAM FLOWING.

Some time last year, an address of Mr. M. J. Harvey, of Epping, N. H., was published in the FARMER, recounting some of the means by which farming could be made to pay. Among these, was one which a gentleman present criticised, and Mr. Harvey explained himself. It was in regard to the benefit of irrigation, by throwing on water with a dam. The water was to be thrown on in early spring. It stayed on only two or three weeks, was then drawn off, and the ground was left in a more fertile condition, in consequence, I suppose, of the sediment carried on and left by the water, or by fertilizing matter which the water held in a state of solution. That water directly from a spring near by, or water filled with muddy matter, should fertilize somewhat, I have no doubt. In my case I have a brook where irrigation by ditching would

be difficult, but the water could be dammed and thrown on with small expense. There is no spring within a hundred rods. The brook is high in early spring, the water from hill sides around coming in large quantities from snow and rain, and also to considerable extent from the spring; but by the first of June, it is usually dry where I wish to irrigate. I have consulted many practical farmers, but none have yet advised me to flood the soil. Some say the land will be made sour. Mr. Harvey says the ground must be left bare in the winter to freeze, or the English grasses will die out, and poorer grasses replace them. Some of the soil is clayey, but most of it is a good loam, of rather a sandy nature below. It is a soil which has received from surrounding fields, but does not give off to others, in consequence of its position.

If any one can give me information in regard to the effect of such irrigation, they would oblige. Perhaps Mr. Harvey can give a chapter from personal experience. F.

*Franklin, Mass., July, 1871.*

REMARKS.—We regard the inquiry of our correspondent of much importance. The different effects of water *flowing* over land and of water *standing* upon it are better known than are the causes of these different results. But such flowage is not generally included in the term irrigation.

### GRASS SEEDS.

An editorial in the FARMER, some time ago, recommended the sowing of a greater variety of grass seed. I have usually sowed ten pounds clover, one bushel redtop, and one peck herdsgrass. How shall I change this, or what add, to make a good variety for a common loamy soil? How would the following recipe work?

Three pecks redtop.
One bushel orchard grass.
One peck herdsgrass.

Please answer soon, as I have three acres to sow down, which I intend to do early, with grass alone.

*Franklin, Mass., July, 1871.* F.

REMARKS.—Add the *clover* to your formula, and you will have an excellent variety. We do not yet sufficiently appreciate the value of orchard grass as one of our fodder crops.

### PACKING NEW HAY WITH OLD MEADOW HAY.

I have about six tons of meadow hay of fair quality, but by next winter it will not be as good as it is now, and I wish to make it available if possible. I have about three acres of quite heavy clover. Now will it be advisable for me to lay a course of meadow hay, say twelve inches deep, then a course of fresh cut clover, same thickness, and so on to the end?

I think I saw something to this effect in your paper, but cannot now find it. I don't wish to lose or injure my clover, but somebody has said the fresh clover would impart its sweet fragrance to the old hay and cattle would relish the whole. What do you think of it? Would one foot in depth for the courses be *too* thick? Would it be well to cure it in part, or lay it up green, as it is cut? &c.

A SUBSCRIBER.

*Woonsocket, R. I., July 20, 1871.*

REMARKS.—We have had no experience in packing down clover with meadow hay. Have packed straw with hay, with good results. We should have no hesitation in packing the two together as you propose,—making the layers about one foot thick. Should advise curing the clover, but as far as possible in the cock, and handle it carefully while making it and packing it with the hay. It will be a poor time to indulge in doubtful experiments, in the present scarcity of good fodder.

### WITCH GRASS.—RYE GRASS (?)

As the refreshing and much needed rain has cut short our work in the hay field, I will spend a little time in seeking light on a *dark green* subject. Enclosed you will find a stalk of grass which I pulled up to-day, in front of one of our stores, where I found it growing in great luxuriance. It was just in bloom and both stalk and leaves seem very tender as though they would make excellent fodder. Some said it was witch grass, and some gave it other names. So I determined to inquire of the Editor. If it is witch grass, it is its first advent into these parts. W. I. SIMONDS.

*Roxbury, Vt., July 18, 1871.*

REMARKS.—We think it is not witch grass. The leaves are too narrow, the head too loose, the bristle, or beard, or awn too long. You should have sent more of the root, as this is an important characteristic of the *Triticum repens*, with its numerous aliases. We think it is one of the Rye grasses.

### COAL ASHES.

In your reply to my questions in regard to the value of coal ashes, in the FARMER of July 15, you speak of using them on your dryest soils. Now my principal attention for the next two years will be directed to the cultivation and fertilizing of lowish land, which, though not very wet, is far from being dry. If I use coal ashes in my stables as an absorbent, they will be applied as a top-dressing for grass on this land; and I would ask if they will be beneficial to the grass crop there, the soil being partly of a clayey and partly of a loamy nature; a small part will be irrigated. F.

REMARKS.—We have no doubt but the coal ashes will be beneficial on the soil you described. Having a choice of soils on which to use them, we should always select the dry ones.

### SALT.

The salt subject being up, I have a word to say on it. I use it some for stock, partly of course, but not wholly, because everybody does. When accustomed to eating it, young cattle are not as wild when salted occasionally; and with cows giving milk, I have thought it made the butter "come" easier when they were salted often; but it always lessens the flow of milk for a few milkings. Hence in a dry time when feed is dried up I give salt only after a rain; for in a dry time, if salted, they fail to resume their former flow of milk, although one brother says it increases the flow of milk in his cows. I never had cattle fat better than those that had but very little salt during the entire season. It is a cathartic, and I do not believe that physic and fat go well together.

*Addison County, Vt., July, 1871.* T. B.

### COPPERAS AND SALTPETRE WATER.

In the FARMER of July 22, I read a little article recommending copperas and saltpetre water for pear trees that failed to bear. Will you give directions for using? INQUIRER.

*July 25, 1871.*

REMARKS.—In reply, we have to say that no tests have ever been made by us on pear trees with

these articles. Both are quickeners in the soil, and are excellent for most crops. We are now sprinkling pear trees with copperas water to prevent ravages of the pear slug.

If, however, we were to apply copperas and saltpetre to the soil, under pear trees, we should dissolve one pound of each in four gallons of water, making eight gallons for the two pounds. Sowing the same articles in a powdered form might answer the purpose as well, if the ground were moist. The two pounds would be sufficient for some twenty or thirty trees. Please experiment on other trees with each article by itself, and let us know results.

## DEPARTMENT OF AGRICULTURE.

The Monthly Report for July of the Commissioner of Agriculture gives an interesting historical sketch of the origin and progress of this Department.

Up to the year 1836, the patent office business was transacted by a clerk of the Secretary of State. That year it was made a separate bureau, and Hon. Henry Ellsworth was appointed the first Commissioner of Patents. Immediately after his appointment the idea of connecting with the models of the numerous agricultural implements which were collecting in his office a depository of valuable and rare seeds engaged his attention, and without special legal authorization he commenced a system of collecting and distributing such seeds and plants on a small scale.

On the 21st of January, 1839, Hon. Isaac Fletcher, of Vermont, chairman of the Committee on Patents of the House of Representatives, addressed a letter to Commissioner Ellsworth, requesting the communication of information relative to the collection and distribution of seeds and plants; also relative to the practicability of obtaining agricultural statistics. To this letter of inquiry the Commissioner responded on the following day, reciting the action already taken by him to further the cause of agriculture, and assigning many reasons why his previous recommendations should be adopted. In this communication the Commissioner suggested that "arrangements could be made for the exhibition of different kinds of grain, exotic and indigenous, in the new Patent office." In the closing hours of the Twenty-fifth Congress, (act of 3d March, 1839,) the Commissioner was gratified by the passage of an appropriation of $1000, to be taken from the Patent Office fund, for the purpose of collecting and distributing seeds, prosecuting agricultural investigations, and procuring agricultural statistics. Thus originated the agricultural division of the Patent Office.

In his next report, that for 1840, the Commissioner stated that the foreign ministers and officers of the navy had been requested to aid in procuring valuable seeds, &c., and in his report for 1841, he stated that 30,000 packages of seeds had been distributed, and that measures had been taken to collate the agricultural statistics from the returns of the census of 1840. "The importance of an annual report of the state of the crops in different sections, as a preventive against monopoly, and a good criterion to calculate the state of exchange," was commended to the consideration of Congress, and from this suggestion were evolved in time the annual agricultural reports.

Congress made no further appropriation in 1840 or 1841. From 1842 to 1845 an annual appropriation was made. In 1846 it was omitted, and resumed in 1847. In no year up to 1854 did the annual appropriation exceed $5500, and it was generally below that sum.

But we cannot now follow the writer in his details of the history of the department, and of its reports and other labors, further than to say that Mr. Ellsworth resigned in 1845, and was succeeded by Hon. Edmund Burke, of New Hampshire. In 1849 Mr. Burke retired and was succeeded by Hon. Thomas Ewbank, of New York. In 1852 Mr. Silas Hodges, of Vermont, was appointed Commissioner; in 1853 Hon. Charles Mason, of Iowa, was appointed; who was succeeded in 1857 by Hon. Joseph Holt, of Kentucky; he by William D. Bishop, of Connecticut, in 1859. Hon. Philip F. Thomas, of Maryland, and Hon. Thomas G. Clemson were acting commissioners in 1860. In 1861 S. T. Shugert, Esq., took the office and held it till May, 1862, when the Department of Agriculture was established.

Under the new organization, Isaac Newton, of Pennsylvania, was appointed first Agricultural Commissioner in 1862. He died in 1867, and was succeeded by Horace Capron, of Illinois, who resigned August 1, 1871, and Hon. Frederick Watts has been commissioned in his stead.

The total expenditures by the Government for the encouragement of agriculture, from the first appropriation of $1000, in 1839, to the 30th day of June, 1871, exclusive of the cost of printing the agricultural reports, are stated at $2,019,893. The total cost of the building erected for the use of the Department of Agriculture, furniture included, was $140,000, and the cost of the conservatory, was about $25,000.

---

FARM MACHINERY.—In reply to a young farmer who asks, "Will farm machinery pay at first?" Mr. J. Harris replies as follows, in the *American Agriculturist*:—

I should buy as little machinery as possible. In my experience, with a few exceptions, it costs as much, with ordinary hired help, to do work by machinery as by hand. I asked a farmer who has had considerable experience with machines, if they paid? "If bought with good judgment," he replied, "and used with great care, I think they do." A farmer can lose more by using a broken, one-tined fork, a dull, rusty hoe, a worn-out ax, and a battered-up spade than he can save by using a machine to saw wood or a reaper to cut his grain. A small farmer had better *hire* the work done with a machine than to buy the machine himself.

---

TO TAKE BRUISES OUT OF FURNITURE.—Sometimes a valuable article of furniture gets a bruise which remains an "eye sore" to persons who like to have everything "neat and in order." From

some experiments made, we think the following process will bring nearly or quite a smooth surface:—

Wet the parts with warm water; double a piece of brown paper five or six times, soak it in the warm water and lay it on the place; apply on that a warm but not hot flatiron till the moisture is evaporated. If the bruises are not gone repeat the process. After two applications the dent or bruise will be raised to the surface. If the bruise be small, merely soak it with warm water, and hold a red hot iron near the surface, keeping the surface continually wet—the bruise will soon disappear.

---

DEGENERACY OF FARM HORSES.—On copying the substance of a late article in the FARMER on this subject, the *Germantown Telegraph* remarks:—

We trust these statements will have due influence in opening the eyes of our agricultural societies in order that they may see clearer the error they have committed and the absolute importance of doing something—doing a great deal—to stop the degeneracy of our working horses and for the improvement of them. Some weeks ago the *Germantown Telegraph* contained an excellent article from a western correspondent, on the Conestoga horse, which has been copied far and near, and we hope with good effect. The Percheron horse, now being introduced, offers the very opportunity desired to set about improving the working horse, and may be regarded as the very animal for the purpose.

---

## A NEW THEORY OF ORCHARD CULTURE.

Mr. Meehan, editor of the *Gardener's Monthly*, who is not only a scientific botanist and horticulturist, but a close and careful observer of nature, says:

Nearly twenty-five years ago, we found that the *root fibres* of trees were only *annual*—like the leaves they died every year. In 1853 we published it as a fact; we have fought it through until we believe it is now accepted as *scientific truth*. They have the same relation to the main roots as the leaves have to the branches, except that while the leaves are the preparers of the food—the cooks,—the fibres are the providers—the husbandmen of the cooks. Just as the branches are of use only as supporters of the leaves, which, like the ancient rib of Adam, are formed by morphological laws out of tree bodies; so the main roots are only of benefit in so far as they afford the material out of which fibres are formed, to hold the tree in position, and possibly, in a very small degree, to draw in moisture.

Remembering this, now take up very carefully a young tree, and we find that the fibres are nearly *all on the surface*, and that they decrease in number and importance with every inch of depth. In the largest trees scarcely a fibre will be found one foot from the top; large roots—tap roots—you may and will find, but no root that is of the slightest benefit to the *nutrition of the tree*. How then a tree can be benefited by the destruction of this large army of agricultural laborers, toiling at the surface to maintain the growing nation thriving in its many industrial occupations above them, we do not understand.

Mr. Meehan therefore advocates the non-culture of the orchard, allowing it to grow up to grass, in preference; though mulching, to prevent the growth of grass, is better.

---

## SCRAPING TREES.

The object in scraping the trunks of old apple trees is to remove the scales of dead bark, under which insects hide: but as a general rule there is not much advantage in the operation, as there are hundreds of other hiding places nearly as accessible as the trees. The codling moth, for example, if not hiding under these scales to undergo its transformation, will find fences, boards, grass, weeds, &c., from which the flying insect will readily reach the young apples. Washing the trunks of young trees may assist in promoting a healthy surface bark, in some instances. Soapsuds answers well, and if weak may be used at any time of year; if stronger, or if a solution of potash is used, it should be done when the leaves are off, or the tree not growing. Rough bark may be scraped at any time. We desire it, however, to be distinctly understood that we attach very little importance to these operations; but that *good cultivation*, for promoting a thrifty, healthy growth, is far more important, and will give a healthy bark in a much better manner. Those who wash the stems of their trees, it is true, usually have good orchards; but it is because the same industry and attention which induces them to do it, also leads them to attend to good management generally.—*Country Gentleman.*

---

THE COST OF RAISING CATTLE NORTH.—I will try and tell you what it costs to raise a steer till he is three years old. First, take a calf at the first of May. Feeding him milk and a little meal for the first six months, $5; then he wants a pint of meal a day for the first winter—say four bushels, at 75c., about market rates, $3; three-quarters of a ton of hay at $10 per ton, $7.50. The second year, thirty weeks at pasture, 25c. per week, $7.50; a quart of meal a day for twenty-two weeks, $3.75; a ton of hay, $10, beside running to a straw stack. Third year, twenty-six weeks pasturing at 50c. per week, $13; two tons of hay, $20; four quarts of meal a day for six months, twenty-four bushels, $18.

We now have a three-year-old steer at the cost of $87.75. The steer will now, if he has not been pinched much during the summer, weigh 1,600 pounds or over, and will sell for 6c. to 6 1-2c. a pound—probably the latter price—say $108, or a profit of $20. The manure will pay for the care and more too. If I am wrong, will not Mr. J. M. Reeder, or some one that has had more experience, tell me?—*Cor. Rural New Yorker.*

## NEW HAMPSHIRE BOARD OF AGRICULTURE.

THROUGH polite attentions of Hon. MOSES HUMPHREY, President of the Board, we have before us the *First Annual Report* of the *Board of Agriculture* for the State of New Hampshire. It is a handsome volume of 360 pages, from the press of the State Printer, ORREN C. MOORE. The illustrations of the volume are, the new Culver Hall, just dedicated; a Map of the Agricultural College Farm; some fine engravings of Horses, Cattle of various breeds, Sheep, Swine, Poultry, and model houses for the last two. The only engraving in the way of farm implements is the *Webster Plough*, made and used by DANIEL WEBSTER, and now in the Museum of the Agricultural College, at Hanover. Its length is thirteen feet; beam, nine feet one inch; handles, six feet four inches; distance between handles, two feet ten inches; width of mould-board, twenty inches; width of share sixteen inches.

The Secretary of the Board, who has compiled the transactions, gives a rapid history of the progress of agriculture in the State from the time when its rural interests were represented by the pine tree, and when the pursuits of the people were mainly fishing upon the limited sea coast and in the fresh lakes and streams, and hunting the fur bearing and other animals of the forest. Then a ship upon the stocks was adopted as the emblem of industry, and was incorporated into the seal of the State. Thrift and prosperity succeeded. Roads were cut through forests over which

> "Trees, fit for the the masts
> Of some great admiral,"

were drawn to river landings to be floated to the ocean. This led to inland settlements. Cattle were bred, cereals and vegetables cultivated, and the plough and hoe became industrial emblems. Horses supplemented the ox. Teams increased and traversed the State from inland towns to county shires, to villages on river banks, or to the only seaport the State offered. The Secretary then adds:—

"Until this period in the history of New Hampshire agriculture, no wheels had been turned by our frequent waterfalls, nor had their monotonous murmur been relieved by the music of the spindle or the ring of the hammer. But at length the spirit of enterprise, prompted by the desire of gain, converted the wilderness, the rocky hill-side and the barren plain about our water-powers on the Merrimack, the Nashua, the Cocheco, the Ashuelot and other rapid streams, into sites of busy towns and thriving cities. The construction of railways followed, or was simultaneous with the erection of mills and machine shops, and both of these agencies operated to open new markets to the husbandman, to create new fields of rural labor and to bring a profit to the tiller of the soil. Market gardening, the growing of fruit, the raising of milk, the breeding of improved stock, are some of the sources of income to the farmer, which have sprung into life at the call of the progressive spirit of the age."

In speaking of the organized agricultural associations of the State, the first of which there is any reliable account, originated as early as 1814, its central point being at the then important town of Chester, or at Exeter, in Rockingham County. In 1817 societies were formed in Cheshire, Hillsborough and Strafford Counties; in Grafton and Coos in 1819–20. The first grant by the Legislature was $100 to each of the incorporated societies of Rockingham and Cheshire. The following year $300 to the same, and $200 to the Hillsborough, Strafford and Grafton, provided they should organize before the meeting of the next Legislature. Other appropriations were made, under certain conditions, but up to the year 1820, only about $3000 had been expended for the promotion of agriculture by the State.

In 1820, in accordance with the recommendation of Gov. BELL, of Chester, a *State Board of Agriculture* was created. A report from this Board was made and printed in 1822, but no copy of it can now be found. In the year 1870, after the lapse of half a century, a new board was organized, and now consists of the following members:—

*Merrimack County.*—Moses Humphrey, of Concord.
*Belknap County.*—Thomas Coggswell, of Gilmanton.
*Hillsborough County.*—James O. Adams, of Manchester.
*Cheshire County.*—Sampson W. Buffum, of Winchester.
*Carroll County.*—W. H. H. Mason, of Moultonborough.
*Grafton County.*—Luther B. Haskins, of Lyme.
*Strafford County.*—H. R. Roberts, of Rollinsford.
*Rockingham County.*—Joseph F. Lawrence, of Epping.
*Coos County.*—Nathan R. Perkins, of Jefferson.
*Sullivan County.*—John S. Walker, of Claremont.

The first meeting of the Board took place at Concord, Aug., 23, 1870, and organized by the choice of Hon. MOSES HUMPHREY, of Concord, as President, and JAMES O. ADAMS, Esq., of Manchester, as Secretary. A general discussion of the objects of the Board

followed, topics for written articles or future discussion were assigned, and delegates were appointed from the Board to attend the county fairs in the State.

At the second meeting of the Board, the delegates reported, arrangements were made for holding a series of public gatherings, and an excellent address to the farmers of New Hampshire was adopted, and afterwards sent all over the State.

The first public meeting under the auspices of the Board, took place at Concord, on the 29th and 30th of Nov., 1870. Farmers from all portions of the State, and from other States, were present, and were welcomed to the city of Concord, and the hospitalities of its citizens, by the mayor, Hon. A. G. JONES. The President then read the act establishing the *Board of Agriculture*, and stated the plans which the Board had in view for promoting this important industrial art, prominent among which was the proposition to hold public meetings in every section of the State, and draw out the cultivators of the soil, themselves, to take an active part in the discussions. This meeting, he said, was the "initiatory movement, and the programme admits of a wide range of agricultural topics."

The subjects discussed were, "Indian corn; the profit from its cultivation, and its exhausting effects on the soil, compared with other crops." "Manures; the comparative value of commercial, composted and stable manures, and the economy of purchasing fertilizers to compensate for the loss by selling hay and other farm products." "The agricultural advantages of the West and the East compared."

On the second day there was an earnest discussion on "Farmers' Clubs." An essay on "the Drought and the Means of preventing its usual effects," on "Blood Stock," and "on Horses." Discusssions on all these topics were full and earnest, and proved that there are plenty of New Hampshire farmers who can intelligently lead public opinion in agricultural matters, whenever opportunity is presented to them.

Other public meetings were held at Milford, Dec. 22; Winchester, Jan. 18; Keene, Jan. 19; Lebanon, Feb. 6; Derry, Feb. 23; Chester, Feb. 24; Meredith, March, 24; Exeter, March 29. Large numbers attended these meetings, and many individuals, for the first time, took an active part in the discussions.

The report then occupies some sixty-seven pages in returns from towns, replying to a series of questions sent out by the Secretary. These returns show the condition of agriculture in the State, better, perhaps, than anything else. Some of them are quite full; those from Chester, Eaton, and Webster, for instance, are good examples. The report then speaks of "Co-operative organizations," —the New England Society, New Hampshire State Agricultural Society, the several County Societies and the Agricultural College.

Some of the important papers which have been read, are "The Crops and Drought of 1870," by James O. Adams. "Selling Hay and Buying Manures," by J. F. Lawrence. "Phosphates and their Application," by S. C. Pattee. "Sheep Breeding," by Dr. W. H. H. Mason. "Breeds of Cattle," by O. F. R. Waite. "Neat Stock of New Hampshire," by H. R. Roberts. "Points in Short Horns," by S. M. Buffum. "Underdraining," by Joseph B. Walker. "Draining Hampton Marshes," by J. P. Welch. "Grasses and Forage Plants," by George F. Beede. "Plant Life," by William H. Hills. "Indian Corn," by Simon Brown. "Winter Duties," by James O. Adams. "New Hampshire in comparison with other States," by J. F. Lawrence, and "Farming in New Hampshire," by Levi Bartlett.

A paper upon the "Statistics of Production," throughout the State, one upon "The New Cattle Disease," one upon "Noxious Insects and their Destroyers," one upon "The Birds, the Farmer's Friends," and extracts from letters received, close the volume.

Having attended several meetings of the Board, witnessed the numbers attendant upon them, and the decided interest manifested in their transactions,—we cannot doubt that the trifling cost to the State, as stated by the Secretary, for this report, will be repaid many times over by an increased value of crops the present year. And this increase will spring from better knowledge of improved modes of farming, and the *new life* and *interest* infused into the masses by the influence of these meetings. Their doings were published in the *papers*, repeated everywhere by the persons attending them, and became household words.

They were discussed in the woods while felling the forest, in the taverns, the stores, the blacksmith shop, over the lap-stone, and in the grist and lumber mill, whenever their noise would permit. A good work has been commenced. We trust it may be continued. There is plenty of good land in the State which is available for cultivation. Let that be improved to its highest extent, and numberless acres which are now under partial and unprofitable culture, grow up to timber, to keep in motion the thousand wheels which the swift streams of the State will impel.

---

*For the New England Farmer.*

## DRAINAGE OF DRY LANDS.

Not having personally seen the land on Ex-Governor Smyth's estate at Manchester, the profitable *incidental* drainage of which I mentioned in a former communication, and to which, I presume, your correspondent, J. L. Hubbard, alludes in your issue of July 15, I cannot say to what extent the draining improvement has operated; but my practical experience enables me to show Mr. Hubbard that the principle of draining dry lands—without carrying through the drains the moisture from adjoining wet or swampy places—is a good and a profitable one. I suppose satisfaction on this score to be his object.

When I was not "A Fireside Farmer," and when I had to pay at least as much annual rent per acre for land as it can be bought for in many good farming towns in New England, the rage for drainage began to possess the minds of land-owners, and leases were generally drawn making it incumbent on farmers to periodically drain stipulated portions of their holdings until the whole should undergo that improvement. I was of the number so bound, and was as skeptical concerning this incumbency, in the matter of what was considered dry soil, as the most obdurate non-improver could wish. My landlord furnished tiles and I had to furnish labor, and draining being "in the bond" it had to be done. Hundreds of the most intelligent farmers similarly situated as I was, and whose sage practice and experiences were more valuably suggestive than mine, denounced the drainage of dry land as a sheer absurdity—a throwing away of money and material—an imposition on common-sense judgment—a folly which had no justifying feature. The practical testimony of Mr. Smith, of Deanston, one of the fathers of the improved drainage system in Great Britain—of many others who had followed and proved his theory that light lands demanded drainage in order to be profitable—and the demonstrations in its favor by Prof. J. W. F. Johnson, of Edinburg College, the famous writer on Agricultural Chemistry, were of no account with us. We knew better; of course we did. If growlings could have encompassed our drainage it would have easily been done; but we had to go at it with ploughs and spades, and it was performed by dint of their diligent use. and very grudgingly.

Now for consequences, for in them was to be found proof of our wisdom and the great folly of those who opposed us. I had two fields, one falling to the west from a narrow ridge, and including eleven acres; the other more slightly sloping to the east from the same ridge, and containing eight acres. Both were naturally drained; that is to say, the fall from the ridge on the west to the bottom of the field was twenty-six feet, and that on the east seventeen feet. Very superior facilities were afforded by the former for the washing out and away of the manures in the soil during heavy rains; the privilege in this respect on the east side was not exactly so desirable. The soil, in both instances, was a light, loamy clay, very gritty, and on the west side, more than half way down the field, almost what would be called gravel bed. Barley had always been the best crop grown upon it, the reason for which see the books of Agricultural Chemists, and "when seen make a note on't" as Cap'n Cuttle says. About half a dozen rods on the lower part of the west field the land was level, and ran along a highway. The soil here was deep and without grit. It was the best spot for weeds and aquatic grasses that could be found; and also grew excellent turnips, although the labor of keeping the weeds down made the crops hardly so profitable as they might have been. It was just such a spot as would, I believe, have charmed your correspondent, "C. E. K.," to whom I will pay my grateful respects anon.

This west field was drained in the fall, ploughed and winter fallowed. It was cross-ploughed next spring and planted to potatoes, which gave an excellent crop. The season was an average one, but the yield was very superior to what it had ever been known before. The manure used was a mixture from the stable and cow-house for the higher part of the field, and on the lower portion ashes from the yards in a neighboring village.

The second year the land was ploughed and sown to oats. The season was an ordinary one. I had a fine crop—*three hundred bushels more than had ever been raised on the same land.*

I was bound to a four course rotation—green crop,—oats, barley or wheat—hay and clover, and pasture. Another occupation took me from the farm after the hay crop of the third year was harvested (and it was a superior one, although the spring had been a very dry and unfavorable one for grass.) I did not weigh it, and can only speak by the rule of comparative bulk.

Co-incident success showed itself in the ex-

periences of my fellow farmers; and we, as a whole, became as nearly converts to the "stupidity" of draining light lands as could be; and had some conscientious opinions that we were not exactly invested with all the agricultural wisdom then afloat. Time and experience satisfied us that we had been wrong.

Now I could easily fill a page of your excellent practical paper in showing how these beneficial results happened; but it is enough to say that the effect of drainage was to deepen the soil and render it porous; give it power to retain a healthy quantity of water, at a depth where plants could reach it, and in a position where it could not be evaporated by the heat of the sun. There is much fructifying matter in rains and snows, which, if allowed to sink into the soil, instead of being washed off its surface, make a fair manuring of themselves. Let any farmer catch a tub of rain-water, allow it to settle and then examine it, and he will find a quantity of fine sediment, prepared for the food of plants, which will surprise him. Let him, in snow time, take a quantity of the purest snow, press it firmly into a glass tumbler, and cover it carefully up so as to allow nothing to get into it, and when it melts he will find a considerable portion of pure charcoal precipitated, which, left in the soil instead of being washed off, could not but have excellent effect on crops. It is of no use to say that if drainage makes land porous that these fertilizing ingredients will be washed through the soil into the drains; for let any one examine the outlet of a main drain during a heavy shower, and he will find the water flowing from it to be as clear as if coming from a living spring. No; these fertilizing substances, in the process of infiltration, remain in the soil and add to its depth and vital activity. I say nothing of the advantages of ventilation, heat, &c., which are also essentials demanded in a healthy soil, and which thorough drainage will produce in the most desirable and profitable way.

On overhauling the very excellent communication of "C. E. K." of Dudley, Mass., I do not see that we are at issue in anything but one. He seems to hold that irrigation is a beneficial thing, "on good corn land," without drainage; and I respectfully beg leave to differ. Were land under irrigation drained (there being a constant supply of water,) the benefits of drainage would be incalculably greater than if it were otherwise. The reason for my belief is roughly hinted at above, and I think your intelligent correspondent will see the point.

Finally, I entirely approve of "C. E. K.'s" suggestion that experiments should be made with drains on dry land to prove their value or the contrary. It was just by that process that I was *compulsorily* convinced that drainage, *under all circumstances*, was proper and profitable; and I am not sanguine enough to believe that any other method of proof will satisfy thousands of practical farmers—readers of the NEW ENGLAND FARMER—that the theory I have advanced is a correct one. By all means let us have practical evidence, even on a small scale. I indeed challenge it to come forward in my defence, but especially for the benefit of the agricultural community. Thankful that this draining question has engaged the attention of so many intelligent correspondents, I am, &c. A FIRESIDE FARMER.

*Boston, July 17, 1871.*

---

*For the New England Farmer.*

## TOP-DRESSING.---STEAMING HAY.

In the address of G. F. Beede, Fremont, N. H., (see FARMER, July 22,) is some sound advice in regard to the top-dressing of grass lands. But there is one idea to which I would especially refer, and that is, the effect of animal manures in rendering compost materials of greater value, over and above the value of the added manure itself.

Last summer, during the severe drought, I carted a larger quantity of loam than ever before into my stable, piling it up in rear of the cows, and to such a depth under foot as to make it difficult to walk in the stable.

In cleaning the cattle stable, I removed not only all the loam which was wet, and also, as for several years before, a small amount of dry loam to cover it, and to hold the ammonia, but I went still farther, and got down into the cellar a great deal more than I had before supposed to be necessary; thinking that the fermenting of the manure would warm up, loosen, lighten, "leaven," as Mr. B. says, the whole mass; believing, also, that the alkalies and the carbonic and other acids would act as disintegrators on the crude particles of inorganic matter, and that the loam and the manure would be of more value thus worked together, for these reasons, than if all saved and separately applied.

One of my neighbors, an excellent farmer of sound judgment, disagreed with me; thinking, as I had formerly done, that enough to absorb the liquid was about all that was of use in the manure; and that whatever was used farther than this could be directly applied to the field with less labor and the same result. I top-dressed some of my grass land with this material, and the effect was surprising. Cutting a swath lengthwise of the field, commencing with the top-dressed, you passed to the other with the thought of going down a high stair, and in thickness the difference was equally as great, and the quality of the top-dressed was far the best.

The use of rotted loam alone, however, is not practiced so much as it will be sometime. A neighbor of mine has a field at a distance from home, which he has kept in good grass as to quality and quantity for twenty-five years by this means alone, never ploughing, and the soil is only a common light loam.

He digs and heaps up a lot of mould from similar soil on the roadside of the wall, and spreads, after a year's rotting, after haying.

When Massachusetts farmers can afford to buy corn meal for a fertilizer *directly applied*, it is quite evident that the man who raises some other crop will make the most money. Hay will be about as high, and may be higher by the pound than corn, next winter, unless a vast change takes place; and unless some special crops are grown, I can hardly see how a farmer can do better than to collect all the top-dressing material possible, now, in the coming fall, and in winter, keeping a huge stock of it under cover, dry-housed, to be liberally used during that season; and applying to his fields whenever he can, and especially in winter. He will thus save valuable time in the busier season for other purposes.

### Refrigerator and Steaming Box.

In the same issue of your paper there is a description of a home-made refrigerator, such a one as I had just completed for another purpose, except that the space between the two boxes was three, instead of only two inches. The *Journal of Agriculture*, (St. Louis,) contained an article some time ago, in which the writer described a box for steaming hay. He first got his idea from the "Poor Man's Cook Stove," a Norway invention to save fuel. A box was very heavily lined with felt, which is a slow conductor of heat. Then meat, vegetables, or anything to be cooked, can be heated to the right point and placed in the box where it will continue to cook as long as desired. The writer, on the same principle, constructed his box like the refrigerator—*i.e.* two boxes, one within the other, and a space between. The space in this case was filled with chopped straw and sawdust, as I had intended to fill it in my box. But a neighbor told me he thought it would be better to entirely shut up the space and trust to dead air. This I have done, but think I will add the improvement of the refrigerator-man, by lining with old zinc. Of course the box if a poor conductor of heat, will either shut it out or in; the temperature being kept as nearly as possible to that desired for a considerable time. The hay being cut, hot water is applied, the box closed, and cooking goes on. Or, by using ice, the same box becomes a refrigerator at once.

Another winter will show how it will work; but it is to be hoped that the present scarcity of hay will lead many farmers (there should be *no* exception,) to adopt some plan for steaming.

To regulate the size it was first built amply large. Around the inside, splines are screwed, which can be raised or lowered, and the lid sits down *on these splines in the box, high or low*, according to the amount of hay to be cooked. Another lid on top of the box gives the double cover.

If necessary, a pipe to draw off surplus water can be had at the bottom. My neighbor's idea was, that the reason feathers, sawdust, felt, &c., are slow conductors, is because they hold dead air in their own mass, and that the dead air without them would be equally as good. He thought the denser anything may be the more rapid its power of conducting heat,—iron being a dense body and a rapid conductor. But if partly correct, the idea can hardly be wholly so if zinc is a slow conductor. Let every farmer collect all his bedding, without using any article which may be fed out. Leaves, pine needles, brakes, &c., will answer the purpose. Any kind of coarse straw can be scalded or steamed, grain added and fed. By far the cheapest articles of nutrition in animal feed are to be had in corn or some other meal or grain feed. But something of the hay kind is necessary for animal feed, in addition, just as coarse watery feed, like fruits and vegetables, are necessary for a part of our food, instead of all bread, meat or other food of a more concentrated nature.

And there is much coarse, hard, indigestible material which can be combined with grain, in such a manner as to give a given weight of mixed feed, of equal value to English hay, at a much lower price. See the comparative value of different kinds of feed in the latter part of the "Old Farmer's Almanac," 1871.

*Franklin, Mass., 1871.* F.

---

*For the New England Farmer.*

## THE GARDEN IN SEPTEMBER.

Among the many works that have been published on American gardening, that of William Cobbett, although written over fifty years since, is one of the most instructive works that can be placed in the hands of a beginner. Although ignoring some important points of the science, he seems by intuition to have a happy method of teaching practical gardening. His style is plain, clear and strightforward. The history of this notable Englishman is a somewhat remarkable and eventful one, and cannot but be interesting and instructive to all young men who, not content to remain mere plodders, would rise in life. The son of a small farmer, his first occupation was driving small birds from the turnip-seed, and the rook from the pease; trudging the fields with his wooden bottle, and his satchel swung over his shoulders, scarcely able to climb the gates and stiles, or to reach home at the close of day. He comes to America, settles on Long Island, returns to England, and is elected to Parliament, where he missed his calling, not being calculated to figure well in that capacity. His two works, "The American Gardener" and "Cottage Economy," contain much of sterling merit, which will never be outlived. Cobbett's love of rural life, his habits of industry and perseverance are to be recommended as

an example to the young of our day,—further this writer saith not.

With all that may be said and sung of new varities and novelties, suited to the garden, none, or all combined, should lead us to neglect the old and tried, and such as are essential to our comfort and health; neither should we neglect to plan for future campaigns in the garden, nor to save what we already have. In the garden, then, we shall find room this month for the exercise of no small amount of judgment, as well as energy in gathering, marketing or storing, the products. Ignorance or carelessness in these respects may result in disheartening loss. Premature gathering, or gathering under other improper conditions; storing where liable to injury by frost, wet, or other accidents; storing sound and unsound fruits or vegetables without assorting; packing in leaky or improper packages; gathering seeds prematurely, or not at the right stage; storing or packing them before properly cured and dried, or placing them where they will gather dampness or be too hot; leaving products exposed to unruly or trespassing cattle, pigs, &c.; bruising and improper handling, and shiftlessness in marketing or in preparing produce for market, are some of the many ways by which we may fail to realize maximum profits, after producing good crops.

During this month it is often the case that contemplated improvements may be "pushed" to greater advantage than at any other time of the year. Improve every leisure opportunity in commencing or forwarding all well considered plans of permanent improvement.

BEANS.—Gather and put in a dry place as fast as they ripen; save the finest specimens by themselves for seed. Thresh, shell and clean, or assort before marketing. Unripe Limas, gathered before freezing, laid away and dried, are excellent for winter use.

BLACKBERRIES.—Remove the old canes and weak shoots, leaving two or three of the strongest and best for next season's fruiting.

CABBAGE AND CAULIFLOWERS.—Keep late plants well hoed and growing; sow seed for plants for wintering in cold frames.

CELERY.—Earth up as it grows, with dry soil, taking care that no dirt is left between the stems or on the crowns; earth up only when dry.

CORN.—Save the earliest ears on the healthiest and best stalks for next year's seed. Gather before freezing, boil, shave off the grain from the cobs and dry as you do apples, in the sun or by fire, or can, if you think you can do it successfully. Cut and feed the stalks to the cows.

CUCUMBERS.—Save seed from the ripe ones; cut them in two length-ways, and scrape out the seed part into a pail; in a week or so this will ferment, so that the seed will settle and the rest will pour off, when the seed may be washed out clean, in water, and dried in the sun—stir the seed in the pail or tub daily after removing till washed out, and once or twice a day while drying. Sweet pickle may be made from those partly ripe; the small ones should be gathered as fast as they attain a proper size for green pickles, either in vinegar or laid down in salt. For pickling in vinegar, gather carefully, cutting from the vine with scissors or knife, leaving half an inch of stem on each; brush them clean of dirt and dust, being careful not to rub off the little spines; pack in the pickle tub, or pot, with a few peppers, and pour boiling hot spiced vinegar over, and cover them close; when cold put a muslin cloth on the pickles, seeing that the vinegar covers the whole. To salt, clean of dirt as before, or wash them, throw them into a cask, a laying of two to four inches, and give a good coat of salt, as you would in salting beef or pork—don't be afraid of giving too much salt—they will make their own brine, when it should be seen to that the pickles are kept entirely under it. In this way they will keep for years.

ENDIVE.—Give liquid manure, hoe and treat like lettuce; gather up and tie the leaves for blanching.

MANURE.—Save everything that may be converted into plant food, and add to the compost heap; dig and haul muck; gather dry earth, or dry, sift, and store, to use in the privy, hen house, &c.

MELONS.—Gather, use, or market, as fast as they ripen. Seeds may be treated similar to cucumber, as above, where in quantity; when only few, wash out and dry immediately. Ripeness of melons is determined by sound, when snapped with the fingers, or by gently pressing, when a snapping sound is heard.

SPINACH.—Hoe and thin the growing crop. Sow a full crop of the prickly-seeded variety, for winter and spring use, early in the month.

SQUASH.—Gather and pack away fall and winter varieties, secure from freezing, in some dry place. A light frost often injures squashes materially, and often defeats their keeping sound. Harvest as soon as ripe.

TOMATOES.—Make ketchup, or can and preserve the ripe ones; the green ones make excellent pickles, with peppers or spices to season them.

W. H. WHITE.

*South Windsor, Conn., 1871.*

---

*For the New England Farmer.*

## LETTER FROM MAINE.

Season and Crops.—Drought.—Pastures.—Ravages of Grasshoppers.—Call from an Agent.—Blindfolding the Bugs.—Sweet Flag Roots.—Productive Sheep.

Perhaps you may find a space in your ever welcome paper for a few lines from an old correspondent, living away among the hills of Oxford County, in the Pine Tree State.

The season has been thus far very dry. The grass crop on dry land is probably as light, if not the lightest ever cut in this State,

yet on wet land the grass is fair, and is still growing, and as the present indications are very favorable, the out-look for fodder is much better than it was two weeks ago. Everything has looked gloomy indeed. The pastures were as dry as in late autumn, and looked as though the fire had passed over them; grass had become hay, standing in the fields; grain was drying up; potatoes were dyspeptic and sickly; corn, except on moist land, was small and kept low,—many pieces of early planted were spindling out within a foot of the ground; peas were small and but two in a pod. Nothing seemed to flourish but weeds and grasshoppers; the latter more abundant and voracious than they were ever known before. Whole gardens have been stripped of every green thing, and grain fields destroyed almost in a day. Many fields of grain have been cut to save what fodder they might make, as they had been rendered entirely worthless for grain. Some fields of grass were denuded of leaves—nothing but the coarse, fibrous stalk being left, and beans and potatoes have not escaped the general destruction of these winged varmints. These remarks will not apply to all places, only to certain localities, yet grasshoppers are very numerous as far as my knowledge extends. The present indications are that the drought is broken, as we are now having fine showers and have had no hay weather for two days. Vegetation has greatly revived, and all nature is smiling its thanks for a cooling bath—"but who knoweth what a day may bring forth?"

I wish to communicate an experimental fact to your readers, which some of them may already know, yet it will do them no harm to learn that others know the same thing. By the way, I believe in a kitchen garden, and always intend to have one as long as I have strength to do or brains to direct. This season, a little black bug or flea, or some other named insect, destroyed my melon and cucumber vines. I tried various remedies, but did not get much the better of the rascals. One day your agent, E. P. Frost, called on me, as you know, such men will when they have an account against you of long standing, but knowing well how to keep them good natured, I invited him to stop to tea and to look over my premises a little. As we passed through my garden patch, he noticed the forlorn condition of my vines, and asked me "Why do you permit that?" I told him because I could not help myself; was dead beat, &c. He said take half of a newspaper,—any kind but the NEW ENGLAND FARMER,—lay it over the plants, and place a little soil around and on the edges of it, so that the wind should not blow the paper away, and in a short time my plants would be all right. Though rather doubting, I tried it, and it worked like a charm. I think the vines grew much faster under the paper than in the open air, even if there had been no bugs. I say let others go and do likewise. By the way, Mr. Frost is a live man, and just knows his business and attends to it. He is an ever welcome visitor, though he may come with a *sharp bill*.

Where can one find a market for sweet flag root? How should it be prepared for market, and what is it worth a pound? Will you or some of your readers kindly inform some of your Maine subscribers?

O. Brown raised twenty-nine lambs from twenty-six sheep, sold them for $3.00 per head, and sold the wool for sixty cents a pound this year. GEO. H. BROWN.

*Munson, Oxford Co., Me., July 20, 1871.*

---

REMARKS.—We made inquiries at the establishment of Geo. W. Swett, 37 Court street, in relation to the market for Sweet Flag Root. The roots must be cleanly washed, small fibres removed, and the roots split into two or more slices and thoroughly dried. We understood that in this condition it was worth some ten cents a pound. But we should advise any one who contemplated curing any considerable quantity to correspond with Mr. Swett or some other dealer in roots, bark, &c. We also inquired of a man who peddles the root about the city as to its market value. He said he dug himself what he sold, but did not know that there was any market for it by the quantity.

---

### ORCHARD GRASS.

I have been in the habit of cultivating this grass for the last thirty years, and esteem it most highly. It is the first grass to start in the spring, and the last to remain green in the fall. It roots deep and is the least affected by dry weather. It grows well in the shade, starts immediately after being cut, and will produce more feed or grass than any other that I grow, and it is as easily killed by the plough as timothy or clover.

As its habit is to grow in tussocks, I would recommend to sow it with other seed, say equal parts with timothy and clover, if for feed or hay. But I will here say there is no use in sowing it on poor land—it will not grow; it must be rich, and it delights in the rich prairies of Livingston county, Ill.

Orchard grass seed is one of the most difficult to save, and requires a great deal of care and prudence in thus doing. I think it is the earliest seed to mature that I know of; hence, there is no danger of any foul seed with it, and in this latitude (42 1-2) is now in the proper stage to save for seed, which is in dough state. No time should be lost in cutting it now and when the dew is on. Spread thin on the ground after being cut, like grain from the cradle, and cover the heads lightly

with grass until the buts are cured sufficiently so as not to heat, then put in barn or stack. At any and all times use great care in handling, as well as the proper time in cutting, or you will get but a small proportion of the seed. Thresh immediately after harvesting, and use the utmost caution not to have the seed spoiled by heating before threshing. Use new seed only, as old seed will not grow. It is a light seed, weighing about twelve pounds per bushel, and, unless you knew the weight, would think you were sowing chaff.—*S. G. Cone, in Prairie Farmer.*

## UNITED STATES WOOL INTERESTS.

Now that wool growing has again become an interesting item in the farm economy of the United States, the question naturally arises as to the stability of prices in the future. What Americans most need as a pre-requisite to success in business, is a fair comprehension of the probable future, since this knowledge will enable any man of good understanding to shape his affairs to any possible contingency.

The past history of wool growing and wool manufacture in this country has seemed to demonstrate the fact, that in order to success, there must be governmental protection to both; and when we are called upon to say what are the future prospects of wool growing in the United States, we must refer, for a solution to the question, to what will be the policy of the Government in this item of domestic production. Without extending our observations into other matters embraced in a general tariff sytem, we may accept recent developments as significant of a revival of feeling in favor of protection to American wool growing. If this can be assured to the farmers, there is nothing in the way of an increased attention to the raising of sheep in this country.

The presence of a fair proportion of sheep on the farm, with other kinds of live stock, is so eminently desirable, that nothing but ruinous discouragement in the price of wool will prevent our farmers from having them; and with a fair prospect of the continuance of the present encouraging aspects of the wool interest, we shall expect a healthy increase of the sheep flocks of the country. For a successful prosecution of this business everything now seems propitious; the flocks have been weeded of all diseased and undesirable animals, so that the foundation of future increase is both healthy and select, while the commercial disasters of the immediate past will regulate men's minds to a wise and prudent course of future operation in wool growing.—*Rural New Yorker.*

DOSING HORSES.—Drenching a horse with fluid medicines, even if the latter are of an indifferent nature, like milk and molasses, is always very dangerous; but is extremely so, first, when the drench consists of substances,—for instance, oil or grease,—to which horses have a natural aversion; secondly, when the sick horse is suffering with a disease which is attended with fast breathing, like pneumonia, colic, &c.: and thirdly, when the fluid, as is often the case, is poured down in a forcible manner; for in such cases it frequently happens that a part of the fluid enters into the larynx and goes down the windpipe into the lungs, and causes there an inflammation, which frequently becomes fatal.—"*Veterinarian,*" *in Chicago Tribune.*

SCRATCHES—REMEDY.—A farmer and experienced horseman writes the *Rural New Yorker* from Canandaigua, N. Y., that the following is recommended for the worst cases: One pint currier's oil—two ounces oil of vitriol. Put it into a bottle and shake well together, when it is fit for use; bathe well the affected part or parts with it once a day. It will effect a cure in the course of three or four days. If the parts are covered with a rough scab, soften it by rubbing hog's lard upon it every day until the scab slips off. It will soon slip off and leave the legs smooth as ever.

TO REMOVE PAINT FROM IRON.—Dissolve two pounds of potash in a bucket of water; add about one and a half pounds of slaked lime, and stir it well. With a mop apply this mixture to the paint, and after a few minutes it may be easily removed by scraping. As rapidly as the old paint is scraped off, rinse the iron with fresh water, and dry it. This will leave the iron clean and bright.